FitchRatings

Public Finance
Community Development & Social Lending
U.S.A.

U.S. Housing Finance Agency Loan Program Rating Criteria

Master Criteria

Scope

This master criteria report details Fitch Ratings' general methodology for assigning obligation-specific and issuer ratings to the following Housing Finance Agency (HFA) affordable housing loan securitization program bonds: (1) single-family loan programs; (2) pooled multifamily loan programs; and (3) mortgage-backed security (MBS) pass-through programs. The criteria primarily address bonds issued by state HFAs, but also include bonds issued by affordable housing providers such as local HFAs that are similar to state HFAs in terms of portfolio size, debt outstanding and management oversight (herein all referred to as HFAs). These criteria apply to both new ratings and surveillance of existing ratings.

Key Rating Drivers

Fitch focuses on four main factors in assessing the credit quality of affordable housing loan securitization programs as described below. Each sector-specific appendix will define the order of importance of the factors, although, generally, the second and third drivers — cash flow analysis and financial resources and program structure — take on more weight when the first driver (asset quality) is weaker.

Asset Quality: Fitch views asset quality as a key credit component in its analysis of affordable housing loan securitization program ratings. For single-family, MBS pass-through and pooled multifamily programs, asset quality is measured primarily by the mortgage insurance/guarantee provisions on the loans. Fitch also assesses the sufficiency of the investment quality of additional pledged assets.

Cash Flow Analysis: For both single-family and multifamily program ratings, Fitch reviews third-party cash flow model scenarios as a quantitative method to incorporate the riskiness of the asset quality and evaluate the program's liquidity, financial and operating flexibility under various stress scenarios. The results of the cash flow scenarios are typically summarized in a key metric — the program's cash flow asset parity ratio — which measures assets to debt within the program on a forward-looking basis.

Financial Resources and Program Structure: For all HFA affordable housing loan securitization program ratings, Fitch computes program financial ratios and evaluates historical trends for the program (when available). Financial resources can provide flexibility to the bond program to address both short- and long-term credit issues. Fitch also reviews the program's legal documents to evaluate key provisions regarding debt service reserve fund requirements, flow of funds, the availability of general obligation pledges, the cross-collateralization of assets and any excess cash release mechanisms.

Asymmetric Risk Factors: Risk factors such as management oversight of the HFA, the history of transfers from the program, and the state or local economy are also considered when assigning a rating. In some cases, Fitch seeks legal opinions regarding the program structure as specified in sector-specific appendices. These risk factors are not scaled, and only weaker characteristics affect the rating.

Table of Contents

This report updates and replaces "U.S. Housing Finance Agency Loan Program Rating Criteria," dated August 19, 2020.

Related Criteria

Structured Finance and Covered Bonds Counterparty Rating Criteria (November 2021)

Structured Finance and Covered Bonds Interest Rate Stresses Rating Criteria (September 2021)

U.S. RMBS Loan Loss Model Criteria (November 2021)

Analysts

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

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

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

Framework

This master criteria report sets out broad attributes for each key rating driver and is used by Fitch in conjunction with the relevant sector-specific appendices. The sector-specific appendices more fully define the key attributes and provide indicative metrics and stress levels, additional factors and/or specific methodologies. Asset quality is generally the starting point in the rating analysis; however, the relative influence on a rating of qualitative and quantitative factors varies between issuers in a sector as well as over time. As a guideline, where one key rating factor is significantly weaker than the others, this weakest element tends to carry greater weight in the analysis.

When considering the attribute sections throughout the criteria, the affordable housing loan securitization programs that demonstrate characteristics described in the midrange to stronger categories typically are assigned ratings in the 'AA' category. Programs that demonstrate characteristics described in the midrange categories are assigned ratings in the 'A' category. A combination of midrange to weaker, or predominately weaker, characteristics is typical in programs rated 'BBB' and lower. 'AAA' ratings are unlikely to be assigned, unless the mortgages are fully guaranteed, which is more common with MBS pass-through bonds.

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.

Asset Quality

Fitch analyzes the strength of the assets within a bond program. Asset quality refers to the loan protection (primarily afforded by mortgage insurance or government guarantees) and the investment quality of the pledged assets, which are the primary revenue source for debt service payments. For single-family and pooled multifamily loan programs, the pledged assets largely consist of mortgages and, to a lesser extent, investments, mortgage insurance policy proceeds and cash flow liquidity facilities as well as swap contracts when using variable-rate debt.

Mortgage Insurance

In single-family loan and pooled multifamily loan programs, mortgage insurance provides partial or full coverage of any loss suffered from a loan default, thereby reducing or eliminating the loss exposure to a bond program. For both single-family and pooled multifamily loan programs, Fitch's approach differs for programs secured by MBS pass-through certificates and government-insured loans, compared with either privately insured or uninsured loans. A loan-by-loan analysis is conducted for the privately insured and uninsured portions of single-family and multifamily portfolios focusing on the key attributes described in the relevant sector-specific appendix.

Investment Quality and Counterparty Exposure

Although the pledged assets for single-family and pooled multifamily mortgage bond programs consist largely of mortgage loans, the investment portfolio also comprises a portion of the assets. Debt service reserve funds (DSRFs), bond proceed accounts and float funds within a single-family or pooled multifamily bond program are typically invested in investment vehicles that mature on or before the funds will be needed. In the review of investment portfolios, Fitch considers the quality of the investments in line with the "Qualified Investments" section of Fitch's "Structured Finance and Covered Bonds Counterparty Rating Criteria." As such, the minimum ratings for eligible counterparties providing guaranteed investment contracts (GICs) or similar accounts are considered in the credit risk rating table in the referenced criteria.

The investment quality analysis also incorporates the "Structured Finance and Covered Bonds Counterparty Rating Criteria" guidelines regarding transaction documentation for remedial actions in response to ineligibility of investment counterparties. If, under Fitch's review, it is determined that a significant portion of the assets are primarily held in qualified investments, the program would be viewed as having excessive risk with no mitigants to delink the rating from the counterparty risk.

In addition, when HFA loan programs have variable-rate debt with interest rate swap agreements, Fitch reviews the derivative counterparties in line with the "Structured Finance and Covered Bonds Counterparty Rating Criteria" and "Derivative Addendum" guidelines. The minimum ratings for eligible counterparties, and the remedial action options upon the loss of eligibility, are assessed in line with the criteria guidelines.

Key Rating Factors — HFA Loan Programs

Asset Quality	Relevant Indicators	Strong Attributes	Midrange Attributes	Weaker Attributes
Mortgage Insurance				
Asset quality is primarily measured by the mortgage insurance/guarantee provisions on the loans in the portfolio.	Review of issuer-provided data regarding the insurance provisions on loans in the bond program(s).	The single-family and/or multifamily loan portfolio is primarily composed of MBS pass-through certificates and/or government insured or guaranteed loans.	The single-family loan portfolio has a mix of FHA, VA, privately insured and uninsured loans, with perhaps a small percentage of MBS. The multifamily loan portfolio has a mix of guaranteed, insured and subsidized/ uninsured, unsubsidized loans.	The single-family loan portfolio is mainly composed of non-MBS or non-government insured loans. The pooled multifamily loan portfolio is an uninsured, unseasoned portfolio with no government guarantees and little historical data for benchmarking.
Investment and Derivative Counterparty Exposure				
	Review of issuer-provided investment portfolio and derivative provider information in line with the "Structured Finance and Covered Bonds Counterparty Rating Criteria".	N.A. – Attribute ranges do not apply as either the counterparties comply or do not comply with the criteria.	N.A.	N.A.
Cash Flow Analysis				
Third-party cash flow model scenarios are reviewed to evaluate sufficiency of program liquidity and the sensitivity to stressed assumptions. The resulting cash flow(s) asset parity ratio(s) provide a measure of the program's financial and operating flexibility.	Third-Party Cash Flow model scenarios.	Program maintains above 102% cash flow asset parity through the term of the bonds after all stress scenarios. No reliance on debt service reserve funds or any external pledges for liquidity. Positive trends in the level of reserves.	Program maintains at least 102% cash flow asset parity through the term of the bonds after all stress scenarios. May rely on external pledge for liquidity in some of the stress scenarios. Stable or trending positive reserve levels.	Program maintains at least 100% cash flow asset parity through the term of the bonds after incorporating all stress scenarios. Cash flows may rely on tapping and replenishing reserves for liquidity.
Financial Resources and Program Structure				
Analysis of the program financial ratios and evaluation of historical trends (if available), as well as review of bond documents and program structure.	Review of audited financial statements for the program as well as legal documents regarding program structure.	Strong financial ratios compared with historical program information. Bond documents narrowly limit type of loans that may be originated to high credit quality loans. Limited or no provisions for the release of excess funds from the bond program and/or requirement that the program maintain a certain asset parity ratio.	Median financial ratios compared with historical program information. Bond documents provide some limitations on the type and quality of loans that may be originated under program(s). Restrictions on the release of excess funds from the bond program.	Weak financial ratios compared with historical program information. Bond documents do not specify the type of loans that may be originated under program(s). No restrictions on the release of funds from the bond program.
Asymmetric Risk Factors	—	—	Neutral to the Rating	Negative to the Rating
Management Oversight	—	—	Long-standing state or local HFAs or issuing entities with successful track records of providing affordable housing. Maintains sufficient staff and resources to have separate groups to perform initial underwriting, regular asset management and loan workouts. Maintains written board-approved investment policy.	State or local HFAs or issuing entities without a track record of providing and maintaining affordable housing or specific staff dedicated to single-family and multifamily housing. No established investment policy on record.
State Transfers	—	—	No history of state or other transfer requests from the program, or a transparent, predictable transfer amount that allows for management to prepare and measure available resources.	History of unpredictable (in terms of the amount and timing) state or other transfer requests from the program funds.
State Economy	—	—	Stable to positive state economic indicators including employment rates, personal income growth and available housing market data.	Negative trends in state economic indicators, which provide potential warning signs of losses within an SHFA's mortgage portfolios.

Source: Fitch Ratings.

Cash Flow Analysis

Fitch examines third-party cash flow model scenarios in its rating analysis for single-family whole loan, single-family MBS pass-through and pooled multifamily mortgage bond programs, focusing on the sufficiency of program liquidity, the rate and magnitude of surplus accumulation and the sensitivity to stressed assumptions. The resulting cash flow asset parity ratio provides a measure of the program's financial and operating flexibility. For those programs supported by a general obligation (GO) pledge, Fitch evaluates the extent to which single-family or multifamily bond program cash flows demonstrate sufficient excess indenture assets or would require the use of GO funds.

Typical single-family cash flow stress assumptions incorporate a loan loss assumption (for single-family whole loan programs) as well as various prepayment speeds. Additionally, for single-family whole loan, single-family MBS and multifamily programs that have variable-rate debt outstanding, additional stressed cash flow scenarios may be run to address basis or interest rate risk and amortization risk (if a swap is employed) and liquidity fee stresses (if a standby bond purchase agreement [SBPA] is present). If all or a portion of the variable-rate debt is unhedged, Fitch generally floors the downward stress at zero and does not provide a negative stress scenario. (See Fitch's "Structured Finance and Covered Bonds Interest Rate Stresses Rating Criteria." As referenced in the criteria, on its website, Fitch provides an Interest Rate Stress Model Web User Interface, which serves as an interface to its interest rate stress curves.)

Third-party cash flows assume the synthetic fixed rate for the debt when an issuer enters into swap agreements to create a synthetic fixed rate of interest on the variable-rate debt. HFA programs are exposed to basis risk when the variable rate of interest paid to bondholders is greater than the variable rate received from the counterparties on the related swap. Fitch reviews the third-party cash flows to analyze the program's ability to withstand stresses that may result from the difference between amounts paid and amounts received under swap agreements.

Affordable housing loan securitization programs with variable-rate debt and swap agreements are also exposed to amortization risk in the event that the swap amortization schedule fails to match the actual bond amortization as a result of loan prepayments in the underlying mortgage portfolio. Fitch analyzes third-party cash flows at various prepayment speeds to quantify amortization risk under the scenarios. Fitch looks for investment-grade-rated programs to provide cash flows that demonstrate the program's ability to cover the amortization risk, if present.

A liquidity facility or SBPA can be used to cover any liquidity risks to the program related to the issuance of variable-rate debt with a demand feature. Given that the liquidity facilities typically expire prior to the bond maturity, there is market renewal risk upon expiration. Fitch reviews the cash flows to determine whether the program is able to withstand an increased liquidity fee of the greater of 100 basis points or the current rate post-expiration date of the facility to address this risk.

Financial Resources and Program Structure

State and local HFAs addressed under these criteria have a long history as frequent issuers of debt and manage generally large (billion-dollar) asset and liability portfolios, over which they can usually exercise some control regarding financial resources or excess funds. As a result, most agencies have developed at least a moderate degree of net worth and can allocate resources across individual indentures and programs, should the need arise. Fitch assesses the degree to which excess financial resources are available in the program, focusing on the financial asset parity ratio as well as profitability metrics.

Financial Asset Parity

Program financial ratios are used to evaluate historical trends within a program and compare year-over-year performance. The availability of adequate financial resources provides a program with the tools and flexibility often needed to mitigate the negative credit implications of both programmatic (e.g. higher than expected mortgage default rates) and non-programmatic (e.g. credit deterioration of an investment agreement provider) occurrences.

Within affordable housing loan securitization programs, sufficiency of financial resources is primarily assessed by the program's financial asset parity ratio, which measures total pledged assets to debt within the program at a single point in time (compared with the cash flow asset parity that measures pledged assets to debt on a forward-looking basis).

Profitability Margins

The key measures of profitability for HFA affordable housing loan securitization ratings include net interest spread (NIS; or net interest income as a percentage of total interest income); net operating revenue as a percentage of total revenue; and return on assets or equity. Because investments and mortgages constitute nearly all of a program's assets, NIS has a significant influence over profitability. The NIS itself will be influenced in the short run by the relative amount of short-term assets held as liquid reserves or acquisition funds. These short-term investments are likely to have lower yields relative to the corresponding debt structure outstanding. In addition, programs that subsidized or intentionally reduced the offering mortgage rate below traditional costs to remain competitive with the conventional market have built in a long-term drag on net spreads. This drag could be exacerbated by the likelihood of slower prepayments on lower-rate mortgages.

Program Structure

As part of the rating analysis, Fitch reviews the legal documents to ensure that the debt service reserve fund requirements and flow of funds are reflected in the cash flow assumptions. Fitch also assesses the legal document provisions regarding the availability of GO pledges, the cross-collateralization of assets and any excess cash release mechanisms, and takes such provisions into account in the rating analysis. Fitch may also seek legal opinions regarding the transaction structure as further specified in sector-specific criteria.

Asymmetric Risk Factors

Management Oversight

HFAs with experienced management often can identify and correct programmatic, financial or economic problems before they diminish program credit quality. From a loss mitigation standpoint, management's active oversight can enable loan workouts and other strategies to prevent loan foreclosures and subsequent losses. These management characteristics are consistent with issuers whose mortgage bond programs are rated in high investment-grade categories. The effect of the quality of management on the rating can be neutral to negative. Strong management will not lead to higher rating levels. Should weak management lead to financial pressure, there could be an impact on ratings.

Managing Financial Operations

Strong financial management is an integral part of a well-run agency. HFAs with strong financial management operations provides timely audited financial statements with combined statements that include financial information by indenture as well as unaudited quarterly financial statements. It also includes maintaining board-approved written investment policies, investment and cash management systems, sufficient measures of loan loss reserves, and contingency payments, internal accounting controls and an appropriate level of forecasting ability.

Fitch reviews investment policies for evidence of written board-approved guidelines that address not only investment type, but also liquidity, maturity, leveraging, hedging, credit quality and appropriateness for the fund being invested since investment earnings are an important source of revenues to bond programs and the agency overall. The absence of these policies and guidelines may lead to a negative assessment of management oversight when assigning an affordable housing loan securitization program rating.

Staff Experience and Continuity

An issuing entity's staff experience and continuity among key staff members play an important role in keeping a program on track and detecting problems that eventually may erode credit quality. This is of particular importance given the rapidly changing operating environment, constant revisions to tax laws, ebbs and flows of real estate cycles, and changing credit strength of third-party participants (e.g. mortgage insurers, swap counterparties, and liquidity and investment agreement providers) in affordable housing loan securitization programs.

A well-seasoned staff often recognizes opportunities that strengthen bond programs over the long term. A demonstrated ability to balance short-range solutions to interest rate fluctuations and outside competitive forces while making prudent decisions on program changes that may have long-term financial consequences is characteristic of an HFA management team whose bond programs receive high investment-grade ratings. Balancing decisions about whether to recycle prepayments or call bonds, take advantage of cross-call options, offer new types of mortgage products or use variable-rate debt have prolonged effects on a program's performance. Prudent choices by experienced professionals can better position the agency as interest rates and/or real estate cycles move.

Fitch assesses if an HFA has stable, successful management personnel in key operating positions as part of its management analysis. The depth of management in each operating unit is also a key consideration, as it indicates the likelihood of a smooth transition if a key position needs to be filled.

Government-Related Transfers

An HFA's ongoing relationship with the state's executive and legislative branches is taken into consideration when assessing the agency's ability to maintain excess funds in its general fund, particularly for those HFAs that are a department of the state government. State governments have periodically requested various amounts from their respective HFA's excess funds. That risk is assessed by reviewing historical evidence of any state funding transfers from the HFA, which, if deemed material in limiting their public purpose mandate, may constrain the rating. These transfers, depending on the amount and timing, may have an immediate and negative effect on an agency's overall creditworthiness.

The impact of the state relationship on an HFA bond program depends on the degree to which the program relies on financial support from the general fund. A program rating that relies on a GO pledge could potentially be negatively affected by a transfer from the HFA's general fund to the state. Conversely, for a self-supporting program without general fund reliance, state transfers would likely have little impact on the program. In general, the risk of transfer may be partially mitigated if a formula exists such that the transfer amount is tied to an agency's profitability metric, thereby providing a transparent means for the HFA to measure its available resources over time.

Geographic Concentration and State Economy

Geographic dispersion in a loan portfolio is typically limited since HFAs only originate loans within their state. Fitch recognizes that, even with the state concentration that exists, there is still a benefit to having geographic diversity across the state without an excessive concentration in any one market area or local region. For a loan pool issued by a state HFA, Fitch views any significant degree of concentration (greater than 40% of the portfolio) to any particular geographic area as a weaker credit attribute, unless mitigated by the loan program's asset quality and/or financial resources. For local HFAs, the inherent concentration in one market area leads to a negative asymmetric risk assessment for geographic concentration.

The loan portfolio's performance may also be more sensitive to the growth and declines of a single industry or regional economy if the state lacks significant economic diversification or has population concentrated within a few metropolitan statistical areas. This concentration risk is mitigated somewhat as portfolio size increases. Large portfolios usually are originated over a period of years, under various market conditions, and cover an entire real estate cycle, which mitigates vintage risk.

Given the state concentration, Fitch looks at various state economic indicators to help identify conditions that may increase potential losses from a mortgage portfolio. The key state economic indicators are the following: changes in employment rates and comparisons of the state unemployment rate to national averages; as well as changes in the program and state loan delinquency data and comparison of delinquency rates to national averages. These various indicators are linked to housing performance on single-family loan portfolios and provide potential warning signs of losses within a mortgage portfolio.

Surveillance

Fitch monitors all HFA affordable housing loan securitization program ratings and reviews them on an annual basis. Fitch's surveillance methodology is the same as that for new issue ratings; however, third-party cash flow model scenarios may not be available on an annual basis for surveillance purposes, and, therefore, Fitch will rely on the issuer's latest program audited financial statements for its review. Changes potentially warranting a Fitch review outside of the normal annual review cycle include the following:

- New parity debt issued.
- Release of excess funds from the bond program.
- Request from the state for funds from the bond program.
- Reduction in reserve amounts.
- Changes to investment counterparty provider ratings.
- Modification of the interest rate stress assumptions in Fitch's "Structured Finance and Covered Bonds Interest Rate Stresses Rating Criteria."

For MBS pass-through transactions, the GSEs' unconditional guarantee of full and timely payment on the MBS securing the bonds, regardless of actual performance of the underlying loans, is the primary driver of the rating on MBS-supported bonds. Any changes to the U.S. sovereign rating would be directly reflected in the rating on bonds secured by Ginnie Mae MBS. The ratings of Fannie Mae and Freddie Mac are currently directly linked to the U.S. sovereign rating, and, as such, any changes to the U.S. sovereign rating or Fitch's assessment of government support for Fannie/Freddie would be directly reflected in the rating on bonds secured by Fannie Mae or Freddie Mac MBS. Ratings for the GSEs are monitored by the sector analysts in accordance with their respective surveillance schedules.

Rating Assumption Sensitivity

The Appendices detail the Rating Assumption Sensitivity applicable for each type of bond program rating.

Data Sources

Fitch's key rating assumptions described in this report are based on analysis of documents from SHFAs; publicly available information and data; financial information received from issuers, arrangers, underwriters, consultants and other third parties; and Fitch's analytical judgement.

In addition, the data sources Fitch uses in assigning ratings include audited financial statements of the SHFA and program data provided by the issuer, including program reserve funds and investments.

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 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.

Applying Unforeseen Macroeconomic or Industry Developments to Criteria Assumptions

Fitch's rating criteria aim to consider a broad range of market conditions, including severe and low-probability economic and credit risk scenarios. However, when we project a more significant stress than what is included in the criteria framework due to unforeseen macroeconomic or industry developments, we will need to adjust key assumptions to maintain prospective and timely ratings.

In such cases, the analytical rating team may perform an additional stress analysis using updated assumptions that reflect Fitch's view on new macro-economic or industry developments. Only affected key rating assumptions would be adjusted while all other elements of the criteria, including what are the key rating drivers and the mechanisms for how the criteria are applied, will remain unchanged. The new stress assumptions will be more severe than the base assumptions and can only lead to the same, or lower, ratings than the base assumptions.

Examples of when the additional stress analysis will be used to determine ratings include, but are not limited to catastrophic events, pandemics, significant changes to the regulatory or legal environment, and any unexpected developments that lead to a sudden and significant shift in projected consumer or industry behavior. Fitch will provide a public disclosure detailing the expected adjusted assumptions, which may be subject to change, at the beginning of a period that includes additional stress scenarios in its rating analysis. Rating action commentaries will disclose and describe the additional analysis and how it was considered in the rating decision. Fitch will also publicly disclose the end of the period of additional stress scenarios when the assumptions will no longer be applied.

Disclosure

In the initial rating report or rating action commentary, Fitch expects to disclose the insurance composition of the loan portfolio, as well as the financial and stressed cash flow asset parity ratios for the program. Fitch will also disclose the impact of any asymmetric risk factors on the rating. Fitch's rating action commentaries for surveillance reviews will disclose material changes to the program in asset composition, discuss trends in performance and disclose any changes to asymmetric risk factors.

Should there be unforeseen macroeconomic or industry developments that prompt the incorporation of additional stress assumptions, Fitch will disclose and describe the additional stress analysis and how it was considered in the rating decision.

Limitations

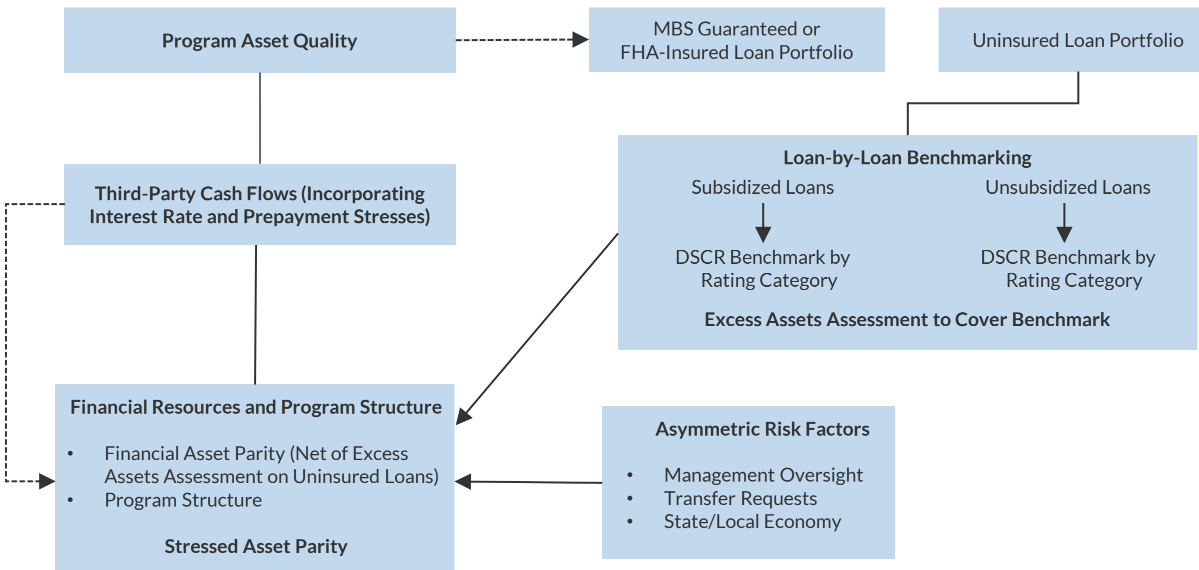
Ratings, including Rating Watches and Outlooks, assigned by Fitch are subject to the limitations specified in Fitch's Ratings Definitions page of its website at www.fitchratings.com.

Appendix A: HFA Single-Family Loan Programs

Appendix A details the broader attributes set out in the master criteria related to the assigning of new ratings and surveilling of existing ratings for single-family (SF) mortgage program bonds issued by HFAs.

HFA affordable housing loan securitization programs are typically rated in the 'AA' category, but ratings range from the 'A' to 'AAA' category depending on the program's financial position and the underlying asset risk profile.

Overview of the Credit Review Process



Note: See Key Rating Factors on page 3 for details on the attributes assessment for each part of the credit review process.
Source Fitch Ratings.

Asset Quality

Most HFA SF programs are secured by a pool of first lien, fixed-rate, 30-year mortgages on primary residences for first-time home buyers (whole loan program); a pool of Ginnie Mae, Fannie Mae and/or Freddie Mac MBS; or some combination thereof. For an SF portfolio that is either predominately MBS or a stand-alone indenture secured on a pass-through basis by MBS, Fitch does not review the program on a loan-by-loan basis but considers the Ginnie/Fannie/Freddie guarantee in assigning a rating *(for more information regarding stand-alone pass-through transactions, see Appendix B: HFA MBS Pass-Through Bonds).*

Mortgage Insurance

The primary credit factor in determining the asset quality of an SF whole loan program (versus an MBS pool) is the presence of private mortgage insurance (PMI), FHA insurance or loan guarantees from the Department of Veterans Affairs (VA) or the Rural Housing Service (RHS). In whole loan programs, mortgage insurance provides partial or full coverage of any loss suffered from a loan default, thereby reducing or eliminating the loss exposure to a bond program. In determining the amount of credit given to mortgage insurance, Fitch takes into account both the amount of the coverage provided and the provider's ability to make payments.

Loss coverage provided by the FHA, VA and RHS carries the backing of the U.S. government. The FHA insures loans for the full principal amount outstanding, delinquent interest payments and certain property foreclosure and disposition costs. Given the deep coverage provisions of FHA insurance, for portfolios that are composed wholly or predominately of FHA-insured loans, Fitch will not review the FHA portion of the portfolio on a loan-by-loan basis to derive severity assumptions. RHS guarantees the lesser of 90% of the principal amount of the loan or 35% of the loan plus losses sustained on up to 85% of the remaining 65%. The VA guarantees loans against a specific amount of loss based on the loan amount, type and origination date. Fitch views a loan portfolio with the majority of loans covered by FHA, VA and RHS as stronger than one with a majority of PMI-backed loans because of the credit quality and significant coverage that federally backed loan insurance programs offer.

PMI companies provide full or partial mortgage insurance coverage against losses on each loan. For partially insured loans, the amount of coverage is usually expressed either as a percentage of the loan (e.g. 30% of the outstanding mortgage) or the portion of the mortgage between the original LTV down to a specific LTV amount (e.g. down to 75% LTV). Generally, the deeper the level of mortgage insurance coverage, the stronger the security. A PMI company also may provide umbrella coverage, referred to as a pool policy that supplements the primary mortgage coverage. Some agencies have a portion of their portfolios covered by pool policies. These policies are issued up to a certain dollar limit for a discrete loan portfolio, protecting against losses that may exceed the primary mortgage coverage on defaulted loans.

The combination of primary and pool coverage defines the level of protection against potential loan losses. However, while Fitch acknowledges the presence of both individual loan insurance and pool insurance from PMI providers, any additional credit given for these policies in Fitch's RMBS model assessment is based on the coverage level and the claims-paying ability rating of the insurance provider. Unrated providers are given limited or no credit at all. The amount of credit applied to PMI is determined in line with Fitch's "RMBS Lenders' Mortgage Insurance Rating Criteria."

In general, the overall importance to the credit profile of the program of any single (primary or pool) mortgage insurer's claims-paying ability varies depending on the diversification of providers within the program and the program's past performance relating to actual loan losses. Large, seasoned and diversified portfolios generally have lower loss expectations and, accordingly, a lower reliance on insurance providers to provide loss coverage. Conversely, a single series indenture with only one mortgage insurance provider and small concentrated loan portfolio depends heavily on the provider's ability to pay claims if portfolio performance deteriorates.

Agency Self-Insurance Funds

Several SHFAs have established self-insurance funds to provide primary and/or pool insurance coverage for some of their bond programs. Fitch discusses how Fitch evaluates SHFA self-insurance funds in the "State Housing Finance Agencies: Mortgage Insurance or Guarantee Fund Program Criteria." If Fitch determines the self-insurance provides additional security, such information will be included as part of the insurance composition disclosure in the rating action commentary for the respective SHFA SF program.

Loan Types

Most HFA SF programs are secured by a pool of first lien, fixed-rate, 30-year mortgages on primary residences for first-time homebuyers. If the loan is other than a first lien or a 30-year term, Fitch will take into account any potential risk added to the program. Many HFAs offer grants or originate second lien mortgages primarily for down payment assistance programs. If the second lien mortgages are pledged assets [and] part of the trust estate, they are incorporated into the rating analysis for a bond program.

Second lien loans, in general, carry additional risk compared with a first lien mortgage. The second lien mortgage, by providing another layer of debt, reduces the amount of equity in the home. Further, the obligation to make payments on the second lien loan places additional financial burden on the borrower in the form of increased monthly payments. If in a subordinated position, payments flow to the first lien before the second, potentially increasing the loss severity for the second lien mortgage. Mitigating these increased risks, HFA second lien loans benefit from active program oversight, with the HFA having access to performance data on the attached first lien loan. Some of the HFA second lien mortgages also include loan forgiveness provisions, increasing the borrower's incentive to repay. For further information regarding the loan loss assumptions for HFA second lien mortgages, please see the 'Expected Loan Loss Severity and 'Expected Loan Loss Frequency' sections of the criteria. The criteria address the loss assumptions for second lien loans that are pledged assets of Fitch-rated HFA single family programs.

Investment Quality and Counterparty Exposure

The investment quality is reviewed in line with the section detailed in the master criteria.

Cash Flow Analysis

Following the review of the asset quality of the portfolio, Fitch examines the cash flow structure of the transaction. The analysis of third-party cash flow statements for SF mortgage bond programs incorporates the riskiness of the asset portfolio through a loan loss assumption based on the loan portfolio characteristics to determine the sufficiency of program liquidity, the rate and magnitude of surplus accumulation, and the sensitivity to stressed assumptions. The resulting cash flow asset parity ratio at its most stressful point provides a measure of the program's financial and operating flexibility.

Generally, for each new issuance under a parity bond program, parity bond program cash flows on a consolidated basis are requested. Fitch determines whether the third-party cash flow projections reflect the trust indenture provisions and options regarding the use and flow of funds, notice periods, bond call priorities and investment options. Fitch also reviews the assumptions in the base case (or expected) third-party cash flow projections regarding use of proceeds, investment returns, timing of bond redemptions and availability of surplus funds to ensure that they are consistent with the financing plan. In the third-party cash flows, the mortgage receipts are lagged a minimum of 30 days from the scheduled receipt, and the initial balances are reconciled to the most recent audited financial statements.

Cash Flow Stress Assumptions

Loan Loss Assumption

One of the key stresses incorporated into the third-party cash flows is the loan loss rate. The loan loss assumption reflects the riskiness of the program's asset quality. For the MBS portion of the portfolio, the RMBS model is not run, and a zero loss assumption is assumed in the cash flows. For the FHA-insured portion of the portfolio, a 3% loan loss assumption is incorporated into the cash flows, unless historical performance data provided for the program deviate from that assumption, in which case the loan loss assumption will be based on the data provided by the HFA. For all other insured or uninsured loans in the portfolio, an expected loan loss assumption for a specific loan pool is calculated by multiplying a loan loss severity factor by an expected loan default frequency factor. Arriving at these individual factors is a two-step process as described below.

Expected Loan Loss Severity

For first-lien SF whole loan portfolios that Fitch reviews on a loan-by-loan basis, the tax-exempt housing group employs Fitch's U.S. RMBS loan loss model to derive a portfolio loan loss severity assumption. Once the data for the portfolio on an individual loan basis are input into the RMBS model, a loss severity output is produced at each rating level. The severity output factors in the mortgage insurance provisions for the portfolio. For more information regarding the model inputs, see the Loss Severity section of the "U.S. RMBS Loan Loss Model Criteria."

For tax-exempt housing transactions, the model is not used to set enhancement levels for the bond program or to create thresholds for rating levels. Rather, the loss severity is multiplied by the frequency of foreclosure to determine the total loan loss stress, which is one of multiple stresses reflected in the program cash flows, as discussed below.

If the program also has second lien mortgages, Fitch assumes a loss severity of 100% for all second lien loans and does not derive a severity assumption from the loan loss model. This approach reflects the additional risk inherent in second lien loans as discussed earlier.

Expected Loan Loss Frequency

To arrive at an expected loan loss frequency factor, Fitch reviews the program's historical 60+ day loan delinquency data and compares that to both the program's current 60+ day loan delinquency data and the current 60+ day delinquency data for FHA fixed-rate loans in the state as reported by the Mortgage Bankers Association (MBA). Generally, Fitch then applies a multiplier of 2.0x to either the current HFA reported 60+ day delinquency rate or to the most severe historical rate that the program experienced during the HFA industry's peak delinquency period between 2009 and 2013 to arrive at a frequency stress. In cases where the trend of delinquencies is rising, declining slowly, showing quarter-by-quarter high volatility and/or the portfolio is underperforming state trends, Fitch generally applies a 2.0x multiple to the higher historical 60+ day delinquency rate to keep the stress assumption at the higher stressed frequency. When the housing trends within the state appear to be strengthening and the loan program performance signifies an ongoing trend and a more permanent shift, Fitch will likely apply the 2.0x multiplier to the current 60+ day delinquency rate to arrive at a frequency assumption.

Fitch considers the MBA comparison as it helps determine if the portfolio is underperforming or outperforming all loans in the state and generally performing in line with FHA loan experience. The expectation for an SF affordable housing loan securitization program is for it to outperform the state statistics for all loans given the longstanding HFA practices of prudent mortgage underwriting and offering various borrower counselling programs. This comparative exercise is performed at surveillance or at each new issuance to see how a portfolio changes over time in terms of risk attributes and compares one portfolio to another. To arrive at the stressed case loss assumption and compare portfolios, HFAs provide data on both an individual loan basis for the mortgages (to determine severity) and on a portfolio basis (to determine frequency) in terms of delinquencies and losses.

For second lien mortgages, the approach for determining loss frequency is the same as that of first lien mortgages – to apply a 2.0x multiple to the most severe historical 60+ day delinquency rate for similar types of loans. This approach recognizes that the second lien loans originated by HFAs for down payment assistance are also attached to a first lien loan in the same program with the benefits of HFA oversight. In order to assess the loss frequency assumption for a portfolio of second lien loans, Fitch requests a minimum of five years of performance data for second lien loans that were originated: (1) by the HFA in the same program or a very similar single family program; (2) where the HFA has access to the information on the first lien loan performance; and (3) for the same purpose (typically down payment assistance).

Ultimately, severity is multiplied by frequency to derive the total loan loss assumptions, which serve as aggregate loan loss inputs in the third-party bond program cash flow runs.

Cash Flow and Asset Parity

After incorporating the loan loss assumption and other stress scenarios as described in the master criteria, the resulting asset parity ratio measures assets to debt within the program on a forward-looking basis. Third-party cash flow runs show expected asset parity ratios over the life of the bonds, under various stress scenarios. Fitch has observed that most 'AA' rated SF mortgage bond programs are able to withstand the various prepayment speeds while incorporating all stress assumptions and still maintaining a minimum asset parity ratio of 102%.

Fitch considers the 102% asset parity ratio a key financial threshold on a program basis, as the 2% excess within the bond program has historically provided an adequate cushion to address liquidity issues that may arise due to loan defaults and the subsequent timing of insurance claim payments. Fitch reviews how the loan loss assumptions and subsequent third-party cash flow runs influence a program's asset parity projections and its ability to withstand various stressed scenarios while still maintaining asset parity.

Financial Resources

In addition to the asset quality and cash flow reviews, another major credit component in Fitch's analysis of HFA single-family loan programs is an assessment of the agency's financial strength and trends over time within the SF program. Fitch also reviews the transaction provisions regarding the debt structure, taking into account reserve fund requirements, legal asset parity provisions and/or any GO pledges.

Financial Ratios

Program financial ratios are used to evaluate historical trends within a program and compare year-over-year performance. The availability of adequate financial resources on both the HFA and program level provides an agency with the tools and flexibility often needed to mitigate the negative credit implications of both programmatic (e.g. higher than expected mortgage default rates) and non-programmatic (e.g. credit deterioration of an investment agreement provider) occurrences.

Sufficiency of financial resources is primarily assessed by the SF program's financial asset parity ratio, which measures total pledged assets to debt within the program at a single point in time (compared with the cash flow asset parity that measures pledged assets to debt on a forward-looking basis). Most 'AA' rated SF mortgage bond programs demonstrate a minimum of 102%

financial asset parity. As mentioned earlier, the 102% asset parity ratio is a key threshold (for both the cash flow and financial asset parity ratios), as the 2% excess within the bond program has historically provided an adequate cushion to address liquidity issues that may arise due to loan defaults and the subsequent timing of insurance claim payments.

The key measures of SF program profitability are the net operating margin (net operating revenues as a percentage of total revenues) and net interest spread (NIS, or net interest income as a percentage of total interest income). The net operating margin is a measure of profitability trends and, in addition to fluctuations in net interest income, can also reflect changes to program operating costs, the provision for loan losses and program fees. Although there may be year-to-year fluctuations, over time, a 'AA' rated program would typically have relatively stable and positive net operating margins.

Because investments and mortgages constitute nearly all of a bond program's assets, the NIS influences profitability. The NIS itself is affected in the short run by the relative amount of short-term assets held as liquid reserves or acquisition funds, as these investments are likely to incur negative arbitrage relative to the corresponding debt outstanding. NIS is further influenced by the difference among the yield on the program's mortgage portfolio, the cost of its outstanding debt and the relative size of the program's equity base. Single-family loan programs that subsidized or intentionally reduced the offering mortgage rate below traditional costs to remain competitive with the conventional market have built in a long-term drag on net spreads, and Fitch views this as a negative credit factor.

Program Structure

Generally, the debt of HFA programs is fully amortizing, with relatively level debt service payments. For large parity indentures, there may be periods of greater stress in the debt structure, and Fitch evaluates, primarily through the cash flow analysis, the program's excess capacity to handle such stress.

General Obligation Pledge

Sufficient financial resources can often compensate for insufficient asset protection. This is particularly true of bonds primarily secured by a riskier asset base (e.g. minimal mortgage insurance) but further secured by the GO pledge of a well-capitalized agency. A financially strong agency, which is often characterized by having excess funds beyond program or agency requirements, can often tolerate a higher level of cash flow uncertainty within its bond programs. Fitch will consider whether the presence of a GO pledge offers additional credit support to a single-family program rating. In cases where bonds materially rely on outside resources due to insufficient assets within the program, the rating would reflect the rating level of the entity providing the support.

Provision for the Release of Funds

Fitch reviews the SF program's indenture provisions regarding the release of excess funds from the indenture. Fitch considers a stronger attribute to be indenture provisions that either restrict the release of excess funds (closed loop indenture) or allow for the release of funds only if a specific asset parity threshold is met. Fitch evaluates the program's legal provisions regarding asset parity and determines whether specific levels must be maintained prior to the release of excess funds.

Asymmetric Risk Factors

Management Oversight

In addition to the management factors outlined in the master criteria, Fitch considers the following for single-family mortgage programs. A distinguishing feature of the HFA single-family loan programs addressed under these criteria is that the agency provides management supervision over the program, and often the loans are serviced internally at the HFA. Internal servicing decreases vulnerability to servicing disruptions as a result of poor performance or shifts in the core business of outside providers. Whether internal or external servicing is used, most HFAs have established in-house loan loss mitigation procedures and loan workouts for troubled borrowers to reduce potential claims and losses from foreclosed loans. These procedures help shorten the length of time that cash flow is interrupted. Many of the HFAs also offer counseling to homebuyers prior to purchase or offer homebuyer assistance programs. Fitch believes that this strong oversight, in addition to the more conservative underwriting criteria at origination, has contributed to lower delinquency rates among HFA borrowers in most cases.

For loan portfolios that are heavily uninsured or privately insured with unrated providers, Fitch actively monitors an SF program loan portfolio performance as an indication of potential loss trends. Fitch reviews quarterly delinquency and foreclosure statistics provided by the Mortgage Bankers Association and compares the HFA's portfolio to national and state delinquency and foreclosure statistics, highlighting trends that may affect its rated SF bond programs. Fitch reviews performance on both a dollar and count (number of loans) basis, and believes that measuring delinquency rates on a dollar basis provides a more conservative indication of any potential ultimate loss to the portfolio. Through conversations with management, Fitch assesses whether strategies are being employed to cure delinquencies and/or mitigate losses.

In addition to loss mitigation strategies, Fitch evaluates the following areas when assessing HFA management capabilities: history of successful financial operations; staff personnel experience and continuity; the use of variable-rate debt (if applicable); the use of the HFA's GO pledge; program track record as well as program oversight and asset management; multifamily and SF loan servicing capabilities; disclosure abilities; and composition of the board and level of participation. The availability of a reliable management information system can enhance management's ability to provide detailed information regarding financial operations, bond information and performance measures, leading to greater transparency as well as more timely release of investor information.

Property Types

Fitch's analysis takes into account the property types of the loans that are being originated for the loan pool, as certain property types introduce greater levels of risk to the program. The property types purchased with HFA mortgages usually include SF detached homes and condominiums but may also include manufactured housing and two- to four-family homes. Fitch views SF detached homes as the property type with the lowest incidence of default as, historically, that has been the case relative to other property loan types.

State Government Transfer Requests

This asymmetric risk factor is reviewed in line with the master criteria.

State Economy

This asymmetric risk factor is reviewed in line with the master criteria.

Rating Assumption Sensitivity

SF affordable housing loan securitization programs are subject to positive or negative adjustment based on actual program experience. The list below includes a non-exhaustive list of the primary sensitivities that can influence SF loan program ratings.

- **Asset Quality:** Changes to the program asset quality as reflected in shifts in the loan portfolio mortgage insurance or government guarantees as well as in the investment quality of reserves.
- **Financial Resources:** Changes in program retained earnings can affect asset parity ratios and potentially reduce a program's ability to service the debt.
- **Delinquencies and Loan Losses:** Increased delinquencies within the underlying loan portfolio can lead to subsequent loan losses to the bond program, which may affect asset parity ratios and overcollateralization levels, and negatively weigh on the rating.
- **Management:** Issuer management decisions regarding the bond program (such as loan origination strategies and/or type or volume of debt issuance) could diminish bond program credit quality.

Appendix B: HFA MBS Pass-Through Programs

Appendix B details the broader attributes set out in the master criteria related to the assigning of new ratings and surveilling of existing ratings for HFA bonds secured, on a pass-through basis, primarily by mortgage-backed securities (MBS) guaranteed by Ginnie Mae; mortgage pass-through certificates (hereafter referred to as MBS) guaranteed by Fannie Mae; or MBS guaranteed by Freddie Mac and pledged to the trustee for holders of the bonds.

Asset Quality

The asset quality is driven by Fannie Mae, Ginnie Mae and/or Freddie Mac's (collectively the government-sponsored enterprises [GSEs]) unconditional guarantee of full and timely payment on the MBS securing the bonds, regardless of actual performance of the underlying loans. Consequently, the performance of the underlying loans or MBS servicer is not factored into the rating on the bonds.

Each of the GSEs, acting through GSE-approved master servicers, purchases mortgages, assembles them into pools, creates trusts from the pools of mortgages and sells undivided ownership interests in the trusts through issuances of MBS. The GSEs guarantee timely payment of the interest and principal on the distribution dates for the related MBS, regardless of the performance of the underlying mortgages. Fitch views the Fannie Mae, Ginnie Mae and/or Freddie Mac guaranty as the primary rating driver component in our analysis of MBS pass-through structures.

Ginnie Mae obligations are unconditionally guaranteed by the U.S. government, and its rating is solely a function of the U.S. government's sovereign rating. Any changes to the U.S. sovereign rating would be directly reflected in the rating on bonds secured by Ginnie Mae MBS. The ratings of Fannie Mae and Freddie Mac are currently directly linked to the U.S. sovereign rating and, as such, any changes to the U.S. sovereign rating would be directly reflected in the rating on bonds secured by Fannie Mae or Freddie Mac MBS. Should Fitch's view of the strength of government support for Fannie/Freddie Mac be reduced, the rating of Fannie Mae/Freddie Mac may be delinked from the U.S. sovereign rating and any resulting rating action on Fannie Mae/Freddie Mac would also be reflected in the rating on the bonds secured by Fannie/Freddie Mac MBS pass-throughs.

The GSEs' guaranty is relied on to supplement amounts received by the MBS trust upon a shortfall to permit full and timely payments of principal and interest on the MBS distribution date. The mechanisms that govern this guaranty are detailed in separate guaranty agreements for each GSE. Fitch's rating relies on the pledge of guaranteed MBS payments to bondholders.

Cash Flow Analysis

Timing Provisions

Given that the distribution dates differ for Ginnie Mae I, Ginnie Mae II, Fannie Mae and Freddie Mac MBS (as outlined in the table to the right), Fitch reviews the third-party cash flow model scenarios to determine whether they reflect the appropriate timing for the MBS distribution date(s) based on the transaction's composition of GSE MBS. Fitch also reviews the cash flows to ensure that the first bond debt service payment date is no sooner than the latest MBS distribution date and mirrors the debt service payment date as defined in the indenture.

MBS Distribution Dates

Type of MBS	Distribution Date[a]
Ginnie Mae I	15th day of the month
Ginnie Mae II	20th day of the month
Fannie Mae	25th day of the month
Freddie Mac	15th day of the month

[a]In each case, if not a business day, the distribution date is the next following business day.
Source: Ginnie Mae/ Fannie Mae/ Freddie Mac.

Fees

Payments received by bond trustees on MBS are net of servicer and guarantee fees, which vary with the type of MBS. Consequently, Fitch reviews the cash flow MBS rates to assess whether they reflect the underlying mortgage rates, net of the servicer and guarantee fees. Trustee and issuer administrative fees are not deducted from mortgage revenues prior to calculating the pass-through amount. Rather, they are paid following bond debt service payments from MBS revenues that are in excess of bond debt service requirements (including early bond redemptions). Fitch analyzes the bond indenture flow of funds regarding payment of fees and determines whether these fees are paid after bond principal and interest payments in the cash flow model scenarios.

Reserve Funds

Fitch reviews that the treatment of the reserve funds (if any) in the bond documents are the same as that reflected in the cash flows. Fitch reviews the sizing of the fund, as reflected in the bond documents, and determines whether it aligns with amounts assumed in the cash flows. Fitch also determines that the cash flows do not assume any reserve interest earnings.

Prepayment Stresses

Fitch reviews cash flow sufficiency under various stressed MBS prepayment scenarios. The loans underlying the MBS can generally be prepaid prior to their maturity, and these prepayments are correspondingly passed through as MBS repayments and used to prepay a like principal amount of the bonds. Typically, the cash flows are modeled assuming BMA, prepayment speeds of: 0% (no prepayments); 100% (moderate prepayments); 500% (rapid prepayments); and split prepayment runs for high/low interest rate MBS, as applicable. Split prepayment cash flow stresses assume faster prepayment speeds for high interest rate MBS and slower prepayment speeds for low interest rate MBS.

Fitch analyzes the above-mentioned cash flow prepayment stresses to assess whether interest rates on the remaining MBS are sufficient to pay debt service on the bonds for the remaining term. If any stressed prepayment scenario demonstrates a shortfall with regard to payment of fees, Fitch reviews the structure of the transaction for the accumulation of funds in the trust to cover such fees and checks and for the absence of default provisions for non-payment of fees.

Post-Pricing Verification

Fitch assigns a rating based on preliminary third-party cash flow model scenarios demonstrating that: the effective pass-through rate on each MBS meets or exceeds the interest rate on the debt; the principal amount of MBS pledged to the indenture trustee is greater than or equal to the amount of debt issued under the indenture; and stressed prepayment cash flow runs show sufficient principal and interest coverage for the term of the bonds. Once the bonds have priced, Fitch reviews the final versions of the transaction documents and cash flow model scenarios to determine that they do not materially differ from the draft documents provided to Fitch. If the final bond trust indenture and cash flows do not conform to the aforementioned assumptions, the ratings are subject to withdrawal.

Program Structure

Legal Structure

Fitch only gives rating consideration to bonds supported by MBS representing ownership interests in fixed-rate mortgages. As noted above, such MBS have distribution dates ranging from the 15th–25th of each month, depending on the type of fixed-rate MBS and the GSE guarantor *(see table on page 15)*. Fitch reviews both the bond documents and the cash flows to ensure that, on a monthly basis, bond debt service payments are not scheduled earlier than the latest distribution date for MBS securing the bonds.

As stated, the primary assets securing the bonds are the MBS. Consequently, Fitch examines bond documents to determine whether the legal structure ensures that bondholders will receive the expected security. Fitch confirms that the MBS and associated revenues are validly pledged to bondholders and held in a separate segregated trust fund for the benefit of bondholders. Legal opinions should confirm the enforceability of the legal documents establishing the structure and that the trustee, on behalf of bondholders, has a first lien on and the first claim to the trust estate, including the MBS and its revenues. Specifically, Fitch seeks confirmation from counsel that the trustee or bondholders will have a statutory lien on the trust estate for the sole benefit of the trustee or bondholders.

Alternatively, if such a statutory lien will not be present, Fitch will request an opinion confirming that the trustee, on behalf of bondholders, will receive a first-perfected security interest in the trust estate (based on the Uniform Commercial Code or other applicable state law). The MBS should be registered in the trustee's name and, if certificated, held by the trustee.

In addition, Fitch assesses whether the trust estate is sufficiently shielded from the risk of bankruptcy of the bond issuer. Fitch may request opinions confirming that the bond issuer is not authorized to file a bankruptcy petition for one of the following reasons: (1) the bond issuer is an office, division or arm of its state government and, as such, is not authorized to file a bankruptcy petition; or (2) the bond issuer would be considered a "municipality" under the U.S. Bankruptcy Code and, under the current laws of the state where the issuer is located, municipalities are not specifically authorized to commence voluntary proceedings under Chapter 9 of the U.S. Bankruptcy Code without legislative or executive action. If the issuer's inability to file bankruptcy is established under (2), a change in this status could lead to a change to the rating.

Fitch may also assess, on a case-by-case basis, bond issuers constituting municipalities located in a state that specifically authorizes such entities to become debtors under Chapter 9 of the U.S. Bankruptcy Code and bond issuers that are not municipalities but are "on behalf of" corporations that may be eligible for Chapter 11 bankruptcy.

Factors that Fitch may consider in its rating could include, in appropriate cases, the conduit nature of the bond issuer and the nonrecourse nature of the bonds (as opposed to GO debt that could create an increased risk of insolvency or an increased incentive to seek reorganization); whether applicable statutes or bond documents restrict the use of the trust estate and revenues solely to the bonds; the limited nature of the issuer's operations and the issuer's inability to become subject to an involuntary bankruptcy filing (as confirmed in a legal opinion); the existence of reserve funds if required to support payments temporarily on the bonds; and whether a risk of an issuer bankruptcy may be reduced based on a close nexus between the bond issuer and its municipal or state parent, which could effectively align the bankruptcy risk of the issuer with its municipal or state parent.

A bankruptcy filing concerning such an issuer or events that could materially increase the risk of such a filing could lead to a downgrade of the rating.

Flow of Funds and Reserve Accounts

A key factor in the legal structure is the pass-through nature of the transaction. Fitch reviews the bond documents to evaluate whether, in addition to scheduled principal payments, the MBS principal prepayments are passed through to prepay a like amount of principal on the bonds. This structure ensures that, through the term of the bonds, the MBS principal amount equals or exceeds the outstanding bond amount.

Fitch relies on the GSEs' guaranty documents that require payment by the GSEs on the MBS distribution date. The MBS distribution payments are net of GSE and servicer fees and, therefore, the GSE and servicer fees are not part of the trust estate and are not expected to be reflected in the bond documents. Fitch's analysis of the bond documents includes a review of the scheduled bond principal and interest payment dates to determine that they follow the latest MBS distribution date. Fitch also analyzes whether individual MBS pass-through rates are higher than the highest bond coupon rate and, therefore, the MBS interest will always be sufficient to pay interest on the bonds.

Fitch reviews the bond trust indenture flow of funds in the transaction to determine that MBS revenues are applied first to pay principal and interest on the bonds prior to payment of trustee, issuer or any other fees. Fitch's review also addresses the flow of funds for any unscheduled principal prepayments to determine whether they are transferred to the bond trustee no later than the month following receipt and whether the bond documents require that they be used to redeem a corresponding principal amount of bonds.

The primary security for MBS pass-through transactions is the pledge of MBS, but there may also be reliance on funds accumulating in the trust to cover fees. Fitch reviews the provisions regarding payment of fees to ensure that accrued unpaid fees do not result in an event of default and that there are no default provisions for non-payment of fees.

Bond proceeds are typically used to purchase existing MBS that will be transferred to the bond trustee on the bond closing date and, as such, Fitch requests a final schedule with the MBS CUSIPs or pool numbers, the pass-through interest rates, maturity dates and outstanding principal amounts of all MBS that will be pledged to bondholders. If MBS revenues are to be split between various series of bonds or trusts, Fitch reviews the associated documents that govern the mechanics to ensure that clear instructions are given to the trustee and that the proper assets have been pledged to the trust estate.

Fitch reviews the legal structure to determine whether the transaction is secured by a sole trust indenture or master indenture with separate supplemental indentures. If there is a master indenture with supplemental trust indentures, Fitch reviews the documents to ensure that there are no cross-collateralization and cross-default provisions among the existing series issued under the master indenture and that bonds are payable solely from the assets and securities designated in the particular supplemental indenture.

Timing Provisions

Since the bonds are structured as pass-through obligations, the timing of debt service on the bonds must match scheduled payments on the related MBS. As noted, Fitch reviews the distribution dates of the underlying MBS to ensure that the trustee for the bondholders will receive funds for timely payments of principal and interest on the bonds. If there is a combination of Ginnie Mae/Fannie Mae/Freddie Mac MBS, Fitch's analysis of the bond documents considers whether the debt service payment date for the bonds is no earlier than the business day after the latest MBS distribution dates (the 25th of each month, if Fannie Mae's are included).

Fitch reviews the bond documents to ensure that, on each bond payment date, the bond trustee applies MBS interest and scheduled principal to pay the scheduled bond debt service. Fitch also assesses whether the documents specify the timing for the bond trustee to apply monthly MBS principal repayments received from the prepayments on the underlying mortgages to prepay a like amount of principal on the bonds. Fitch determines whether the bond redemption provisions allow for monthly mandatory bond redemptions at par in amounts equal to the amount of the passed-through MBS principal prepayments. Fitch also analyzes whether the bond documents outline the specific timing by which the master servicer has to provide a report to the trustee detailing the amount of funds for that month's distribution date from the following sources: scheduled principal payments; principal prepayments; and scheduled interest payments.

Given that the first distribution date for all GSE MBS occurs in the month following the month in which the certificates are issued, Fitch reviews the sufficiency of the capitalized interest to cover bond interest for the period prior to the first MBS distribution date. Fitch reviews the cash flow report assumptions regarding sufficiency of capitalized interest to determine whether this lag is taken into account.

Interest Accrual

Given the pass-through nature of the transactions, as outlined above, Fitch reviews the legal documents to determine that the MBS and bond interest accrual periods align. Although interest is not passed through until the dates specified above, the interest accrual period for MBS is always a calendar month, and interest is calculated based on a 360-day year of 12 30-day months. Fitch reviews the bond indenture definition of interest accrual basis to determine whether it matches the MBS basis. Fitch also reviews the bond indenture definition of initial bond interest payment date to determine whether it aligns with the date in the cash flow report.

Role of the Master Servicer

The master servicer acts as the intermediary between the mortgage servicer and the bond trustee. Each month, the master servicer collects MBS payments, subtracts the GSEs' and their own fees and makes the net payment to the bond trustee. Fitch does not independently evaluate the master servicer but relies on the GSEs' approval of the master servicer and the existence of master servicer agreements. The master servicer agreements generally require master servicers to advance funds, for liquidity purposes, if sufficient funds are not received from the underlying mortgage payments from the mortgage servicer and, following a midmonth mortgage prepayment, to cover interest that would have accrued on the mortgage that month.

However, a master servicer's advances are typically for liquidity purposes only and are recoverable by the master servicer from subsequent collections or recoveries. Because the GSEs provide the ultimate guarantee of all payments on MBS, bondholders do not rely on the creditworthiness of the master servicer. Ultimately, the GSEs are required to advance funds sufficient to make the full monthly payment to bondholders.

Optional Redemptions

Fitch reviews the optional defeasance or redemption provisions, if any, of a bond indenture. Fitch assesses whether the bond documents require verification of sufficient amounts available to defease or redeem bonds as a condition to an optional defeasance or redemption. In addition, Fitch reviews the bond documents for the presence of an opinion requirement, as a condition to an optional defeasance or redemption of any bonds, that the funds used for such defeasance or redemption, including to pay any prepayment premium, would not be subject to the automatic stay or be recoverable from bondholders as an avoidable preferential transfer under the U.S. Bankruptcy Code.

Upon a defeasance of the bonds, Fitch will withdraw the existing rating on the bonds. Upon issuer request, prerefunded bonds may be reviewed for the assignment of a new rating based on the prerefunding security structure, and Fitch will review the opinions, cash flows and escrow documents. For additional information, see "U.S. Public Finance Pre-refunded Bonds Rating Criteria." Upon redemption of the bonds, Fitch will not review the opinions or cash flows and will withdraw the existing rating on the bonds.

Amendments or Changes

Fitch reviews the bond documents for the presence of a requirement that a copy of all amendments thereof be promptly provided to Fitch and that the trustee give prompt notice to Fitch upon the replacement of the trustee.

Rating Assumption Sensitivity

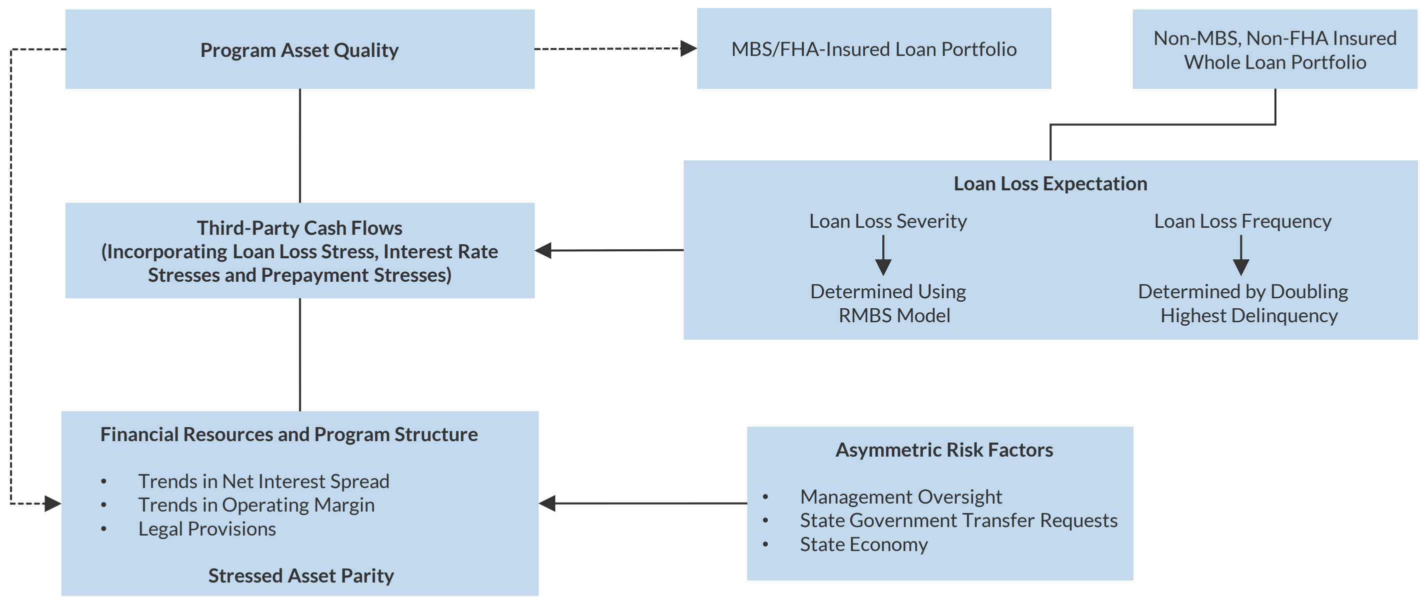
Below is a non-exhaustive list of the primary sensitivities that can influence HFA bonds secured, on a pass-through basis, primarily by MBS:

- **U.S. Sovereign Link:** As the ratings of the GSEs are currently linked to the U.S. sovereign rating, any rating action on the U.S. sovereign rating will directly affect the rating on the bonds.
- **Fannie Mae/Freddie Mac Delinked:** Should Fitch's view of the strength of government support for Fannie Mae/Freddie Mac be reduced or downgraded, the rating of Fannie Mae/Freddie Mac may be delinked from the U.S. sovereign rating and may result in negative pressure on the bonds.
- **Bankruptcy Remote:** A change in the bankruptcy remote status of the debt issuer could lead to a change in the rating and constrain it to that of the issuer's GO debt.

Appendix C: HFA Pooled Multifamily Loan Programs

Appendix C details the broader attributes set out in the master criteria related to the assigning of new ratings and surveilling of existing ratings for HFA multifamily housing bonds secured by pools of multifamily loans. The below relates to loan portfolios including a mix of fully guaranteed, insured, subsidized and/or uninsured loans.

Overview of the Credit Review Process



Source Fitch Ratings.

Asset Quality

Pool Composition

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 underlying collateral in a pool of multifamily properties is often composed of a mix of loan types — insured, subsidized and/or uninsured/unsubsidized mortgages (see table on the following page for a definition of each category). Fitch's analysis considers the percentage of loans in each of these three categories and the associated potential risks or interruptions to the revenue stream that a particular loan type may present to the portfolio. Fitch's approach considers that the risk an individual property may present is often mitigated through the strength that the pooling effect can provide. However, this benefit is only present if the assets in the pool are cross-collateralized and a gross revenue pledge is offered.

In some cases, a multifamily pool may be secured partially or fully by Ginnie Mae or Fannie Mae MBS, or some combination thereof. For the portion of the portfolio consisting of MBS, Fitch does not review the program on a loan-by-loan basis, but considers the full and timely payment of the Ginnie/Fannie guarantee, with zero loss expectations, in assessing the asset quality.

Insured Portfolio

For the insured mortgage portion of the portfolio, the focus of Fitch's analysis is on credit enhancement provided by a federal or SHFA insurance program. For FHA-insured loans, claim payments are backed by the full faith and credit of the U.S. The insured portion of the portfolio is evaluated to assess whether the loan is insured under traditional FHA insurance or the FHA risk-share program (see table below for definitions of HUD-insured loans) and the timeliness and extent to which the insurance program guarantees payment of principal and interest on all or a portion of the mortgage upon a borrower's failure to make payment. Reviewing mortgages that benefit from

FHA insurance programs is different from analyzing the subsidized and uninsured/unsubsidized portions of the loan pool, in which the credit approach is focused more on attributes of the underlying collateral, as discussed below.

For loans insured under both FHA insurance programs, Fitch views the potential loss to be minimal (0%–2%). In the case of the loans insured under the FHA risk-share program, the housing issuer is expected to be able to demonstrate its ability to support the portion of the risk it is committing to in the risk-share agreement should the loan default. Under risk sharing, any claim is paid up front by FHA following a default, and the sharing of any loss occurs after the foreclosure process has settled; therefore, there is no assumption of loss from the timing of a claim payment.

Multifamily Insured/Subsidized Loan Types

Type	Characteristics
HUD-Insured	
FHA-Insured	Through the Federal Housing Administration (FHA), the U.S. Department of Housing and Urban Development (HUD; a cabinet department in the executive branch of the U.S. federal government) provides mortgage insurance for multifamily mortgage loans to facilitate the new construction or substantial rehabilitation of multifamily rental housing for moderate-income families and elderly and handicapped persons. FHA insurance is backed by the full faith and credit of the U.S., and Fitch views the loan loss to be minimal from these loans.
Risk Share	HUD also provides FHA mortgage insurance through its risk-sharing program, which provides credit enhancement for multifamily mortgages that are underwritten and originated by housing finance agencies (HFAs). HUD and the HFAs share the risk of the mortgage. The risk-sharing program provides FHA mortgage insurance with which the HFA elects to share with HUD 10%–90% of any loss on a loan.
Subsidized	
Section 8	Section 8 is a federal program that provides rental assistance to low-income families in the private rental market. For project-based Section 8 properties, HUD provides a housing assistance payment (HAP) contract subsidizing the units in a multifamily property. Project-based contracts provide formulated rental subsidies based on HUD-determined rents and tenant affordability for a specified number of units (generally all) in a multifamily development. The project-based Section 8 program provides rent subsidies to ensure that eligible tenants pay no more than 30% of their monthly income for housing, including utilities. The subsidy payment is made from HUD funds directly to the property owner. 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 may be subject to annual increases as determined by HUD based on local or regional Fair Market Rates for similar units. The subsidies, in addition to tenant payments, typically provide the majority of the revenue to secure mortgage revenue bond payments and lend a high degree of stability to revenue flow.
Section 236	Section 236 is a federal program to facilitate the construction and rehabilitation of affordable multifamily rental housing. Under the program, HUD provides a long-term interest rate subsidy known as an interest rate reduction payment. The subsidy equals the difference between the mortgage rate that the mortgagor would have been obligated to pay for the property when the mortgage was originated and the amount the mortgagor would pay if the mortgage bore a 1% annual interest rate.
Uninsured/Unsubsidized	
	Loans that do not have the benefit of any insurance or any subsidy are often referred to as affordable housing or market rate.

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

In the case of traditional FHA insurance, the potential loss is reflective of timing lags and accrued fees after the loan defaults. Fitch evaluates how an assignment fee is addressed and the timing of the claim payment. Traditional FHA insurance pays claims on 100% of the outstanding principal amount of the loan (minus a 1% assignment fee) and covers accrued interest at a HUD-designated rate until the claim is paid. If an FHA-insured loan does not make reserve provisions up front to cover the 1% assignment fee and any potential shortfall due to a payment timing lag, then these amounts should be addressed with excess assets within the bond program. Similarly, for loans insured by an SHFA mortgage insurance program, funds may need to be set aside to cover any timing issues related to the claims-paying mechanics specific to that program.

Subsidized and Uninsured/Unsubsidized Loans

Fitch's credit analysis for subsidized and uninsured/unsubsidized loans in a pool is markedly different from its approach to FHA-insured mortgage loans, as described above. It is focused on three key attributes, listed in order of importance as they relate to the project: DSCR; the vacancy rate; and the project's physical condition and needs assessment. The entity that provides oversight of the portfolio typically provides Fitch these data on a loan-by-loan basis. Fitch reviews the factors for each loan to determine which end of the DSCR benchmarking range to use in the benchmarking process. Using the actual loan DSCR, Fitch benchmarks that ratio off an expected DSCR level for a given rating category. The benchmarking concept is described below *(see the DSCR Parameters for Pooled Multifamily Loans by Loan Type table on page 24*.

To provide Fitch with an overview of the assets, issuers typically provide a report that details key data points for each loan in the pool, as follows:

- Property name.
- Current DSCR.
- Location.
- Current occupancy or vacancy.
- Loan type — subsidized or uninsured/unsubsidized.
- Rental subsidy program, if applicable.
- Loan origination date.
- Mortgage balance and final maturity.
- Physical condition and needs assessment, as determined by the pool sponsor.

Pool Attributes

Attributes	Description
Stronger	High percentage of guaranteed or insured loans. For the subsidized/uninsured and unsubsidized portion of the portfolio, a large number of seasoned loans within the majority of the pool performing at or above the DSCR benchmark; therefore, limited need for excess assets. Average occupancy levels at or above 95% for the subsidized portion and 90% for the unsubsidized portion. Predominately strong assessments of the physical condition of the properties.
Midrange	Mix of guaranteed, insured and subsidized/uninsured, and unsubsidized loans in the portfolio. For the subsidized/uninsured and unsubsidized portion of the portfolio, loan portfolio with seasoned and unseasoned loans performing near or slightly below the DSCR benchmark; therefore, increased reliance on excess assets. Average occupancy levels for the pool are at least 90%. Assessments of the physical condition of the properties are in the mid to strong range.
Weaker	Uninsured, unseasoned loan portfolio with no government guarantees and large amount of new construction loans (30% or higher) with little historical data for benchmarking. Pools with fewer than 30 loans. Average occupancy levels below 90% and physical condition assessments in the weak category.

DSCR – Debt service coverage ratio.
Source: Fitch Ratings.

Fitch believes the most important data point for assessing the health of an uninsured project is the project's DSCR, as it also incorporates the project's occupancy level. As illustrated on the following page, Fitch uses a benchmarking analysis to determine whether the DSCR for each loan meets the rating category parameters, and if not, whether there are sufficient excess assets in the program to satisfy the coverage levels. Programs with loans meeting the coverage levels will not always qualify for a commensurate rating within the corresponding range if other cash flow, financial resources or asymmetric factors carry more weight in assigning a rating.

Fitch anticipates reviewing a capital needs assessment based on a scale set and administered by the sponsor. For newly formed pools without a long performance history, Fitch may conduct site visits for a portion of the portfolio and visit properties that fall into each of the major categories on that scale, to sample the assessment data. Fitch does not consider a project's LTV in the overall rating analysis because the majority of the properties in a pool secure tax-exempt housing bonds and, by design, are affordable rental properties. Affordable rental properties carry numerous regulatory and use restrictions, and, therefore, it is not feasible to assume that the property can be liquidated and used for purposes outside the provision of affordable housing.

In addition to the three factors discussed above, there are other characteristics or circumstances that can either enhance a pool's security or provide more risk to a pool of subsidized or uninsured/unsubsidized assets. Fitch views the following items as serving to enhance bondholder security for a pooled transaction: the inclusion of senior housing projects and the seasoning of the loan portfolio. Conversely, Fitch believes that certain elements, such as pool delinquencies, geographic concentration and the inclusion of new construction loans to a pool, can increase overall risk. These individual factors are further discussed later in this report.

Loan Performance

Debt Service Coverage

When assessing the subsidized and uninsured/unsubsidized portions of the portfolio in a pooled housing transaction, three main factors determine loan performance: DSCR for the property (demonstrating property cash flow), the property's occupancy level and the project's physical condition as assessed by the HFA. A project's DSCR is calculated as net operating income or free cash flow available (after operating expenses and reserve and replacement deposits are satisfied) for debt service in any given year, divided by the total amount of loan debt service due in that year. Typically, HFA pooled multifamily housing bonds are fully amortizing with level debt service. If debt service is not level, the DSCR would be calculated using MADS on the bonds.

Since Fitch deems the DSCR to be most important in the analysis, it begins the review by benchmarking each individual subsidized and uninsured/unsubsidized loan's DSCR. Fitch's approach considers subsidized properties to provide a higher degree of predictability to a project's revenue stream than unsubsidized properties given the more stabilized cash flow from federal and state subsidies. As such, the DSCR parameters for subsidized loans are lower than those for uninsured/unsubsidized loans.

Both subsidized and unsubsidized projects with Low Income Housing Tax Credit (LIHTC) equity benefit from the stability provided by additional underwriting, compliance and monitoring requirements. In addition to HFA 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 project's operating revenues, which, in general, has led to strong performance. Therefore, all other factors equal, Fitch evaluates an unsubsidized project with LIHTC equity as having a stronger degree of revenue stability than an unsubsidized project 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.

Fitch has observed that excess assets are typically provided for loans that are underperforming the benchmarks referenced in the table below (page 24). To determine which end of the DSCR benchmark range to use in its benchmarking approach, Fitch reviews vacancy data and an HFA's internal risk ratings.

DSCR Parameters for Pooled Multifamily Loans by Loan Type

(x)

Rating	Subsidized Section 8/Section 236	Uninsured/Unsubsidized
AA	1.45–1.55	1.65–1.75
A	1.25–1.35	1.45–1.55
BBB	1.10–1.20	1.30–1.40

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 above). 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.

Occupancy

The ability of mortgagors to make loan debt service payments is largely affected by their ability to achieve and maintain a sufficient level of project occupancy. As these projects are providing affordable housing to low- and moderate-income individuals at below-market rent levels, Fitch expects that demand for these units will be strong and occupancy levels high. Project occupancy at an average rate of 95% for the subsidized loans is considered a stronger credit attribute. For uninsured/unsubsidized loans, the occupancy expectation is not as high since the projects' rent levels are more subject to surrounding market conditions, without the built-in demand generally associated with subsidized projects. Average occupancy rates of 90% or higher for uninsured/unsubsidized loans are considered to be in the stronger attribute category.

As noted above, Fitch will review the vacancy data for a project to determine which end of the DSCR benchmark range to use in its benchmarking approach. Fitch does not impose additional vacancy stresses to individual loans in the portfolio in its stress analysis. Instead, Fitch can choose to use higher DSCRs in its benchmarking, if necessary, to account for this factor.

Internal Risk Assessments

Fitch looks to the HFA to provide information regarding each multifamily project's physical condition and needs assessment. The HFA's process of assigning an internal risk rating typically involves a comprehensive site visit to the property by the asset manager, an evaluation of the properties' physical condition for capital needs, and a meeting with the property staff to review office procedures and recordkeeping. This process typically culminates in the HFA assigning a loan-by-loan scoring to each individual property (on a scale determined by the HFA). As with the vacancy data, Fitch will review the HFA's internal risk assessments to determine which end of the DSCR benchmark range to use in its benchmarking approach.

To assess the adequacy of excess assets, Fitch will conduct an analysis utilizing the framework described below.

Examples of Debt Service Coverage Benchmarking

Assumptions used in assessing the amount of excess assets that a pool sets aside to cover risk at a given rating level may differ. The main factor considered is the type of loan (insured versus uninsured) in the pool and whether that loan benefits from a subsidy program or not. Fitch also reviews the amount of new construction loans that are part of the portfolio, as described later in this criteria report, to consider the amount of excess assets to mitigate this risk.

Example 1 demonstrates Fitch's assessment of the amount of excess assets provided to cover the risk of a subsidized loan with an underperforming DSCR for the 'AA' rating category. As shown below, Fitch uses the other variables outside of debt service coverage (vacancy rate and needs assessment) to determine which DSCR benchmark to use within the benchmarking range for a given rating category. The stronger these other variables, the lower the benchmark used in the process. Conversely, the weaker these elements, the higher the benchmarks used within the range. For a subsidized loan with strong occupancy, factors such as a low internal issuer risk assessment rating (explained further above) and whether it is performing at the lower end of the DSCR range (1.45x) would be used in the benchmarking process for this ‘AA’ rated bond program. For a subsidized loan in a pool supporting a ‘AA’ rated bond program, Fitch typically begins to look for excess assets once the DSCR is below 1.45x.

Example 1: DSCR Benchmarking for AA Rating Scenario (Subsidized Loan)

Loan Amount: $1,000,000
Loan Type — Section 8 Subsidized
Project Occupancy — 98%
Project Risk Assessment Score — Low
DSCR = 1.20x
DSCR Benchmark for a AA Rated Multifamily Pooled Bond Program = 1.45x–1.55x
DSCR Benchmark Based on Attributes — 1.45x
Actual DSCR/DSCR Benchmark = % of Loan Value for Excess Assets Assessment Discount (1.20x / 1.45x = 82.8%) $1,000,000 x 82.8% = $828,000
Excess Assets Assessment t: $1,000,000 – $828,000 = $172,000

DSCR – Debt service coverage ratio.
Source: Fitch Ratings.

Example 2 below demonstrates the excess assets assessment to cover the risk of an uninsured/unsubsidized loan with an underperforming DSCR for the ‘AA’ rating. The high end of the benchmarking range (1.75x) for a ‘AA’ rated program is used because the project exhibits weak occupancy and has a high risk assessment from the sponsor. For an uninsured and unsubsidized loan, Fitch begins to look to additional assets for loans with DSCRs of less than 165% at the ‘AA’ rating level.

Example 2: DSCR Benchmarking for AA Rating Scenario (Uninsured/Unsubsidized Loan)

Loan Amount: $1,000,000
Loan Type — Uninsured/Unsubsidized
Project Occupancy — 82%
Project Risk Assessment Score — High
DSCR = 1.15x
DSCR Benchmark for a AA Multifamily Pooled Bond Program = 1.65x–1.75x
DSCR Benchmark Based on Attributes — 1.75x
Actual DSCR/DSCR Benchmark = % of Loan Value for Excess Asset Assessment Discount (1.15x / 1.75x = 65.7%) $1,000,000 x 65.7% = $657,000
Excess Assets Assessment: $1,000,000 – $657,000 = $343,000

Source: Fitch Ratings.

Once Fitch has evaluated the DSCRs for each subsidized and uninsured/unsubsidized loan in the pool, the individual amounts are then aggregated to determine Fitch’s excess assets assessment for the entire subsidized and uninsured/unsubsidized portions of the portfolio. For new uninsured construction loans and those loans for non-traditional multifamily housing (such as health facilities and/or commercial properties), Fitch’s excess assets assessment is 100% of the loan’s principal amount less reserve set-asides, which is aggregated with the individual loan amounts. This amount is then factored into the Fitch stressed asset-parity ratio, which is further described in the Overcollateralization section below. Fitch may consider, on a case-by-case basis, an excess assets amount that is less than 100% of the construction loan if certain mitigating factors are present. For example, some substantial rehabilitation loans may be built in phases and have cash flow from existing units during the construction period.

The tenant base for a multifamily project loan often varies. The typical multifamily project can be for families, seniors and/or persons with disabilities. Diversity among project loans by tenant base has little credit impact. The only item to note in this regard is the trend of properties with a family tenant base often experiencing greater capital needs than projects with a mixed tenant base, as these projects experience more wear and tear and may have higher annual maintenance expenses. For housing projects for the elderly, Fitch takes into account that the stress on the property's physical condition may be less than that of family properties.

Investment Quality and Counterparty Exposure

The investment quality is reviewed in line with the section detailed in the master criteria.

Cash Flow Analysis

Fitch examines housing cash flow models provided by a third party for multifamily bond programs in its rating analysis, focusing on the ability of the program to make timely debt service payments, the sufficiency of program liquidity, the rate and magnitude of surplus accumulation as reflected in the program OC and the sensitivity to alternative assumptions, where applicable. For further information, see the Cash Flow Analysis section in the master criteria.

Financial Resources and Program Structure

Overcollateralization — Financial Asset Parity

The main method of calculating a multifamily bond program's financial strength is gauging the level of OC present, or the amount that assets exceed debt. The primary ratio used to capture this is the financial asset parity ratio. This ratio is calculated by dividing the dollar amount of total program pledged assets (including the multifamily mortgages and amounts on deposit in program funds and reserves) by the total amount of bonds outstanding.

Generally, the sources of excess funds are primarily the programs themselves. The program's asset parity ratio is calculated by using the issuer's audited financial statements and the balance sheet for that bond program. Fitch's approach arrives at its excess assets assessment consistent with the portfolio's risk profile and compares that with OC available in the bond program to support the rating.

A typical housing bond program rated in the 'AA' rating category maintains an asset parity ratio of no less than 102% net of any excess assets or loan loss reserves. The asset parity ratio should be sufficient such that the program assets not only equal or exceed 2% of program debt, but also cover the total amount of excess assets necessary to mitigate risks within the loan portfolio. The excess assets assessment is determined by aggregating all the following items if present: insured loan discounting amounts for risk-share commitments; FHA-insured discounts due to a 1% assignment fee and/or amounts associated with timing delays otherwise not covered; excess asset assessment resulting from the benchmarking of uninsured/unsubsidized loans; and any new construction loan set-aside amounts. In the table below, Fitch would consider the asset parity ratio net of the excess assets assessment (102.6%) when assigning a rating. This example would be in line with the 'AA' rated peer group for housing bonds.

Calculating Asset Parity

Total Program Assets: $1,290,000
Total Amount of Bonds Outstanding = $1,200,000
Program Asset Parity Ratio = $1,290,000 / $1,200,000 = 107.5%
Calculating Asset Parity Net of Excess Assets Assessment: Total Program Assets = $1,290,000
Total Amount of Bonds Outstanding = $1,200,000
Excess Assets Assessment as Determined by the Benchmarking of the Loan Portfolio = $58,000 Total Program Assets Net of Excess Assets Assessment = $1,232,000
Program Asset Parity Ratio = $1,232,000 / $1,200,000 = 102.6%

Source: Fitch Ratings.

Program Structure

Debt Profile

The characteristics of a multifamily bond financing, including its amount, maturity and tranche structure, are 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. A multifamily pool transaction that receives a Fitch investment-grade rating typically includes fully amortizing, level debt with a debt service reserve fund sized at no less than maximum semi-annual debt service. Fully amortizing, level debt eliminates balloon payment and refinancing risk, and helps a financing maintain consistent DSCRs.

Cross-Collateralization

A typical multifamily bond trust indenture that receives an investment-grade rating is set up to direct that all the projects' gross revenues be deposited directly with the trustee and used to pay debt service, creating a gross revenue pledge and cross-collateralization. Fitch views this as a credit strength.

The typical flow of funds structure for bonds with investment-grade ratings has all rents and subsidies, if any, deposited directly into the bond fund and transferred monthly in the following priority to:

- Bond principal and interest accounts and pro-rata share of debt service coming due.
- Property and escrow account at one-twelfth of annual property taxes and insurance expenses.
- Operating fund to pay all ordinary operating expenses.
- Reserve fund replenishment, if necessary.
- Replacement reserve fund at one-twelfth the annual amount as established by the bond legal documents or Housing Assistance Program (HAP) contract.
- Expense fund, to pay ordinary trustee fees and then any other necessary fees and expenses.

Pledges

Fitch will consider whether the presence of a GO pledge offers additional credit support to a multifamily bond program rating. In cases where bonds materially rely on outside resources due to insufficient assets within the program, the rating would reflect the rating level of the entity providing the support.

In addition to a GO pledge from an HFA, there are bond programs in which a state or municipality provides a moral obligation (MO) pledge, typically to replenish the debt service reserve fund of the indenture if it is tapped. Fitch believes the MO pledge can potentially add strength to the credit. However, the degree of additional credit enhancement that it provides is dependent on several factors as outlined in the following report: "U.S. Public Tax-Supported Rating Criteria" [Appendix D]).

Additional Loans

Fitch also considers the potential for additional loans to be added to the pool that secures the bond program. Having bond legal documents that specifically define the types of loans permitted to be originated and added to the pool is considered a midrange attribute that corresponds with ratings in the 'AA' rating category. If the type of loan is narrowly defined to include only insured and/or guaranteed loans, Fitch would consider this to be a credit strength. However, if the potential for adding new loans is permitted but the type is left undefined, the portfolio has the potential to change dramatically over time and potentially diminish bondholder security, and Fitch views this as a weaker attribute that can negatively affect the rating. Absent significant program restrictions or financial enhancements to diminish credit risk, Fitch does not expect that the bond programs rated under these criteria will be eligible for rating upgrades, as large, active multifamily portfolios are typically in a constant state of change with new loans being added continuously.

Reserves

Cash reserve accounts are typically funded at closing for unexpected events. The level of reserve funded is contingent on many factors specific to portfolio composition and bond structure. Most revenue bond programs are set up to include a debt service reserve fund, which is typically sized in an amount equivalent to no less than maximum semi-annual debt service for bond programs secured by a pool of multifamily loans; this sizing level increases the likelihood of it receiving an investment-grade rating. Additional mortgage reserve funds may also be present to add to bondholder security. The size of the mortgage reserve is based on characteristics of the underlying loans in the pool. The sizing of the reserves is typically defined in the bond trust indenture, and Fitch views the presence of the sizing mechanics as a midrange attribute that corresponds with ratings in the 'AA' category.

Excess Funds Release

Many pooled multifamily bond programs allow for the release of excess cash from the trust indenture after the flow of funds has been satisfied. Fitch believes that having a release mechanism for surplus funds that is dependent on meeting certain benchmarks is a midrange attribute often associated with programs rated in the 'AA' rating category. In a typical structure that receives an investment-grade rating, excess funds flow out of the trust estate only on meeting certain DSCR benchmarks or covenants established at the original underwriting and after an annual audit is performed on the property or properties. A structure that does not allow for the release of excess cash is a strong attribute associated with high investment-grade ratings, as excess funds can serve as an additional financial cushion to the bond program, if necessary.

Asymmetric Risk Factors

Management Oversight

The HFAs that issue housing bonds backed by pools of multifamily loans typically have a long, mission-driven history of providing affordable housing. Most have large, active boards that often review new loans to be incorporated into existing pools and also provide pool oversight on an ongoing basis in terms of asset management decisions and workouts, if necessary.

For a pool of multifamily properties, Fitch assesses management's ability to provide oversight of the entire portfolio, which involves strong underwriting, servicing and tracking of the assets. For subsidized and uninsured/unsubsidized loan portfolios, Fitch looks to the HFA to present current data in a loan-by-loan format and to update the data annually for surveillance purposes. An HFA's inability to provide timely and thorough information is viewed as a credit negative.

Underwriting Standards

Fitch reviews the SHFA's multifamily program underwriting procedures; however, it does not review the underwriting for each individual loan within a pool as part of its analysis. Fitch reviews the written underwriting procedures and guidelines to determine whether the following items are addressed in order for a transaction to achieve an investment-grade rating:

- Extent of demand for the proposed housing in the market area through a feasibility study or market demand study.
- Marketability of the proposed units and plan.
- Evaluation of the quality and experience of the development team and the property manager.
- Sufficiency of the projected revenues to pay debt service and operating expenses.
- Criteria for types of insurance and coverage minimums, appraisals, environmental testing and design standards.
- Construction requirements monitoring, if applicable.
- Reserve and replacement funds to be set aside out of regular monthly cash flow for each loan on a per unit basis.

Compliance with Housing Programs

Fitch looks to the HFA to monitor developments that are not in compliance with HUD requirements, so that insurance and/or subsidies are not interrupted in the case of insured and subsidized loans.

Additionally, the HFA must also ensure that subsidies will not be interrupted throughout the transfer process if the property ownership changes. As part of its analysis, Fitch will ask the issuer or pool sponsor to verify whether any of the properties that are HUD-insured or benefit from HUD subsidies has received notification letters indicating noncompliance.

Delinquencies

Fitch reviews the pool of subsidized and uninsured/unsubsidized mortgage loans for any historical or current project delinquencies. For a newly formed pool without a long performance history, Fitch will request three years of payment history for each loan to review. For investment-grade ratings, there is typically a minimal level of current delinquencies in the pool. Fitch considers a minimal level to be equal to or less than 2% of the entire pool based on the total dollar amount of the outstanding mortgage balance, and higher levels may be considered a credit negative. If delinquencies are higher than 2%, Fitch will request further detail on delinquent loans and will adjust benchmarks accordingly.

Fitch reviews an HFA's multifamily management team history of early intervention regarding potentially troubled loans and the actions taken to remedy any delinquencies within a pool of multifamily properties. Fitch determines whether management has provided workout solutions to avoid foreclosures through measures such as replacing onsite property management. If an HFA management team's historical record does not demonstrate proactive monitoring and strengthening of a pool's performance, this is viewed as a credit negative.

State Government Transfer Requests

This asymmetric risk factor is reviewed in line with the master criteria.

State Economy

This asymmetric risk factor is reviewed in line with the master criteria.

Rating Assumption Sensitivity

Multifamily housing bond program ratings are subject to positive or negative adjustment based on actual pool performance, portfolio composition, financial strength and legal covenants. Below is a non-exhaustive list of the primary sensitivities that can influence multifamily housing bond ratings.

- **Portfolio Performance:** Deterioration in portfolio performance, particularly for non-insured or non-subsided loans, could raise the excess assets assessment beyond available resources, thereby putting negative pressure on the bond program rating.
- **Portfolio Composition Changes:** Significant long-term changes in portfolio composition between insured loans and non-insured (or non-subsidized) loans could raise/lower the excess assets assessment relative to available resources, thereby putting negative/positive pressure on the bond program rating.
- **Financial Strength**: Loss of program equity either through poor financial performance or transfers out of excess funds could negatively weigh on the bond program rating.
- **Creditors Protection:** Subsequent loosening of financial covenants, liquidity, debt service reserves or other legal aspects of the financing structure could reduce creditors' protection and negatively weigh on the bond program rating.

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.