

RATING METHODOLOGY

Single-Family Rental Securitizations Methodology

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This rating methodology replaces *Single-Family Rental Securitizations Methodology* published in July 2020. We updated and provided increased transparency to our legal analysis framework for SFR transactions. We also made editorial changes to enhance readability and transparency.

Scope

This rating methodology applies to securities backed by loans made to entities that own and lease a portfolio of single-family residential properties.

In this methodology, we explain our approach to assessing credit risks for single-family rental (SFR) securitizations, including quantitative and qualitative factors that are likely to affect rating outcomes in this sector. The underlying loans for these transactions are made to one or more entities that own and lease a portfolio of single-family residential properties. SFR transactions are either single-borrower securitizations, which are backed by one loan to a single borrower, or multi-borrower SFR transactions, which are backed by multiple loans, each to one or more borrowers.

We discuss the asset and liability analysis, including associated modeling, as well as other considerations. We also describe our monitoring approach.

Rating Approach

In this section, we describe the key characteristics of SFR securitizations and summarize our approach to assessing credit risks for SFR securitizations, including quantitative and qualitative factors that are likely to affect rating outcomes in this sector.

The rating approach is similar for single and multi-borrower SFR securitizations, though our approaches for them differ in a few key areas, particularly in assessing the probability of loan default and in assessing the term risk, which is the risk that the rental income from the properties will be insufficient to meet the debt service over the loan's term.

In all SFR transactions, we analyze the collateral to assign a probability of default and an eventual recovery value for each loan. In our recovery analysis for all transactions, we model the proceeds that we expect from a sale of the properties in various stressed house price depreciation scenarios and from the rental income prior to sale. For single-borrower SFR securitizations, our stressed probability of default will typically simulate a scenario in which the borrower cannot refinance its loan at maturity and the securitization must sell the properties. For multi-borrower SFR securitizations, we consider that, even in a distress scenario, not all loans in the pool will default. For a very diversified multi-borrower SFR pool, we conduct loan-level or stratified pool-level analysis to estimate both the probability of default and recovery value.

We also evaluate the quality of property management, the servicers and other third parties, along with the transaction's structural and legal framework. As with all rating methodologies, in applying this methodology, where appropriate, we consider all factors that we deem relevant to our analysis. If actual performance or performance trends are not in line with the assumptions described in this methodology, we may consider or reflect that in our analysis. In addition to these quantitative assessments, rating committees also consider various qualitative factors in their analysis. As such, the assigned rating may differ from the model output.

In certain instances the assumptions or analysis described in this methodology may be US specific and could be adjusted on a case-by-case basis for SFR securitizations issued outside of the US.

Asset-level Analysis and Related Modeling

In this section, we explain how we analyze the underlying assets that back SFR securitizations and how we estimate potential losses on those assets.

Collateral Analysis

There are two primary components to our collateral analysis: (1) We assign a cumulative probability of default for the life of each loan (loan default analysis), and (2) we evaluate the expected recovery from the sale of the properties backing each loan in a conditional scenario that the loan defaults.

For single-borrower SFR transactions, we typically assess the initial probability of default on the loan at or near 100%. We use such a conservative stress mainly because, at this time, most SFR operators generally do not have very strong credit profiles, and, despite a wealth of data on liquidation proceeds from distressed sales of single-family houses, the market has not yet experienced an actual refinancing of an SFR loan during a period of economic stress. We may reduce the probability of default for large loans in single-borrower transactions as the market matures, or as SFR operators prove themselves over a transaction seasons.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moodys.com> for the most updated credit rating action information and rating history.

Furthermore, for single-borrower transactions the loan must pass our term risk analysis under our base case assumptions. This means that the sustainable income generated from the properties must be sufficient to meet the non-balloon payments due during the loan term. In the absence of a loan passing term risk analysis, we may apply additional qualitative stresses to the transaction.

For multi-borrower transactions, our probability of default assessment for a given loan depends on the results of our term risk analysis and certain loan attributes, such as its debt service coverage ratio (DSCR) and loan-to-value (LTV) ratio. We also consider the loan's amortization profile, its interest rate relative to the prevailing market rate and its amortization term. We also assess the quality of underwriting and underwriting guidelines, as well as the strength of the sponsor and its operational and property management abilities.

In our recovery analysis, we focus on two sources of cash: (1) the proceeds from the securitization trust's potential sale of the properties or the loans, and (2) the rental income from the properties prior to the sale. The collateral for the loan(s) typically consists of a combination of mortgages on and assignment of rents of the underlying properties, guarantees from the borrowers' owners, and, if applicable, pledges of the parents' equity in the borrowers. If a loan defaults, the collateral enables the securitization trust to sell the underlying properties by taking ownership of the borrower's equity interest or by foreclosing on the mortgages on the underlying properties. It also permits the securitization trust to collect the rental income from the properties prior to sale. For multi-borrower SFR transactions, some loans may not have equity pledges. Alternatively, the securitization trust may be able to sell the loan along with its collateral to an institutional buyer.

Loan Probability of Default Analysis

For single-borrower SFR securitizations, we typically analyze the transaction under scenarios in which refinancing fails and proceeds needed to repay the debt are realized from the recovery on the portfolio, as explained above in the "Collateral Analysis" section.

For multi-borrower SFR securitizations, on the other hand, the probability that all loans in the portfolio will default or fail to refinance decreases with an increase in the number of loans in a portfolio. When evaluating more granular multi-borrower SFR portfolios in our default analysis, we consider a given loan's DSCR, LTV, amortization profile, whether the interest rate is fixed or floating and the loan term. More specifically, our baseline probability of default assumption typically corresponds to a B1 rating at the applicable remaining term to maturity of the loan and we adjust this assumption based on the loan's characteristics and several drivers of default risk. DSCR is the biggest driver of default risk for loans that utilize DSCR as an underwriting attribute. Our actual adjustment for DSCR is pool- and underwriting-guideline specific. For example, a loan with a low LTV and a Moody's DSCR that exceeds 1.4x will have an estimated five-year probability of default of approximately 16%-17%. If the DSCR drops to 1.0x, holding all other attributes constant, the estimated five-year probability of default is close to 50%. The next biggest drivers of default risk are LTV and amortization profile.

For concentrated multi-borrower SFR portfolios, we may use in our analysis a combination of both the single-borrower and more granular multi-borrower approaches.

When we analyze a granular pool of loans with each loan's performance being linked to one underlying property, we may utilize our approach to rating securities backed by US residential mortgage loans (RMBS)¹ as a starting point for analyzing such a pool.

¹ For more information, see our methodology that describes our approach to rating US residential mortgage-backed securities. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Term Risk Analysis

We conduct term risk analysis in which we evaluate whether the debt can be serviced using economic assumptions that reflect our long-term expectations for the single-family market. We conduct a detailed loan-level term risk analysis for single-borrower SFRs and for concentrated multi-borrower SFRs. For more granular multi-borrower transactions, we use underwriting guidelines as a predictor of term risk analysis.

Net Cash Flow Sustainability (Single-Borrower SFR and Concentrated Multi-Borrower SFR)

To determine the borrower's ability to meet ongoing debt service payments, we analyze the properties securing the loan(s) to derive the portfolio's sustainable net cash flow (NCF), defined as net operating income (NOI) less capital expenditures (capex). For single-family homes, capex – such as replacement of roofing, plumbing, HVAC (heating, ventilation and air conditioning), windows, appliances, exterior paint, and driveway maintenance – is relatively higher when measured as a percentage of a property's value or its rental income than is the case for larger commercial properties.

To derive Moody's NCF, we examine key revenue and expense items and compare them to historical and current trends. Where historical data are not available for a nascent SFR portfolio, we review in-place cash flow and the loan underwriter's assumptions. Considering overall industry trends and standards and, where applicable, relative benchmarks based on our experience in commercial multifamily properties, we typically haircut the underwritten NCF. We also differentiate sustainable expense assumptions based on the portfolio's collateral characteristics, such as age of properties, extent of renovations, property management experience and quality, swimming pool maintenance, and unique geographical maintenance issues.

EXHIBIT 1

Simplified Calculation of Moody's Net Cash Flow for SFR Properties (Single-Borrower SFR)

Revenue

Gross Potential Rent
Less: Vacancy, Rents Above Sustainable Levels, Collection Loss, Concessions to Tenants
Plus: Other Income
Effective Gross Income (EGI)

Operating Expenses

Property Management Fee
Utilities
Property Taxes
Homeowners Association (HOA) Fees
Insurance
Repairs, Maintenance and Tenant Turnover Costs
Leasing & Marketing
Other Operating Expenses
Total Operating Expenses

Capital Expenditures (Capex)

Replacement Reserves / Capital Items
Total Capex

Net Operating Income/ Moody's Net Cash Flow

Effective Gross Income (EGI)
Less: Total Operating Expenses
Net Operating Income (NOI)
Less: Total Capex
Moody's Net Cash Flow (NCF)

Source: Moody's Investors Service

MARKET RENT EVALUATION

To derive NCF to service the rated debt, we consider current rental market conditions, the portfolio's recent performance, operating expense ratios, and industry outlooks and forecasts made by market participants. Because SFR securitizations are often backed by collateral across a number of property markets, we typically review revenue and expense data from individual markets in a transaction, as well as at an aggregate level for the transaction.

We qualitatively evaluate the sustainability and trends of prevailing market rent. Within this context, we further consider the adjustments that we apply to current reported rents. Relatively short lease periods for single-family properties allow the property manager to frequently readjust the rental income to the prevailing market conditions. The depth and statistical reliability of the historical rental data inform the haircuts that we embed in our cash flow projections in both expected and stress cases.

VACANCY RATES AND BAD DEBT

Our vacancy assumptions consider the current and historical vacancy rates for homes in the area, the quality of location and tenants, and the submarket vacancy rate for properties of similar quality. We typically apply higher vacancy rates than those estimated by underwriters to reflect an occupancy level that is sustainable over the long term. Bad debt is uncollected rent, also referred to as collection loss, which effectively increases the vacancy rate that needs to be evaluated. Our vacancy rate assumption considers vacant properties that produce no rent as well as other factors that may lead to a partial loss of rents on occupied properties.

TENANT ELIGIBILITY

We view objective tenant eligibility criteria as a positive credit measure that supports stable rental cash flow. Loans with weak or no tenant eligibility criteria could lead to tenant credit deterioration and unstable rental cash flow due to increased collection losses.

RENT CONCESSIONS

When property markets weaken, landlords frequently offer rent concessions. Concessions often appear as one to several months of free rent or a reduction in monthly rent over the lease term. We account for these concessions as either an increase in the vacancy rate or a rent reduction.

OTHER INCOME

SFR securitizations sometimes yield other forms of income besides rent, such as late fees, termination fees, pet fees and parking fees. We consider any available and applicable historical data on these other income streams, and we form a reasonable assumption regarding their sustainability.

Operating Expenses

Although the operation and management of SFR properties closely resembles multifamily properties that we evaluate in commercial real estate securitizations, the geographic dispersion of individual single-family properties can create higher operating costs. Additionally, because each home has unique features, appliances, and building materials, the renovation, maintenance, and marketing costs can be higher than those of typical multifamily properties. However, issuers with large portfolios of SFR properties may realize some economies of scale, such as in the procurement of blanket insurance policies or bulk purchases of paint and carpeting from national suppliers. Expenses may include:

- » **Property management fees.** We typically estimate property management fees to be approximately 8% to 10% of EGI. We restate the property management fee to market rates for third-party managers. Our estimated property management fee also considers, if a loan defaults, the expense that a special servicer may incur to find a replacement property manager.

- » **Utilities.** This includes water, sewer, trash, and other utilities expenses not paid by the tenants.
- » **Property taxes.** We generally restate taxes to market levels using median county tax rates to adjust for potential reassessments and tax abatements, or if growth has been otherwise constrained.
- » **HOA fees.** Owners of condominiums and single-family residences that are part of a homeowner's association typically pay such fees monthly to cover the cost to maintain common areas.
- » **Insurance.** We base this on in-place and historical costs and adjust it for market rates where necessary.
- » **Repairs, maintenance and tenant turnover costs.** These costs include interior and exterior repairs and maintenance, along with painting and decorating associated with the preparation of property for a new rental. We may increase repair and maintenance costs for certain geographies, such as cold weather climates that require snow removal or experience other weather-related wear and tear. When applicable, we also increase our assumption for this expense item to account for the upkeep of swimming pools.
- » **Leasing and marketing.** We typically estimate this based on current and historical expenses, with an expectation that this expense will range from 2% to 4% of EGI, commensurate with a fee of a half-month's rent and average tenant turnover every 12 to 18 months.
- » **Other operating expenses.** These costs do not fit under other categories (e.g., damage that insurance does not cover, eviction costs, etc.).
- » **Replacement reserves and capital items.** We assess the adequacy of the level of replacement reserves, which improve the stability of the cash flow from the collateral backing the loan(s). We assume that the property manager will only maintain the value of the properties in the SFR pool if the transaction structure requires the manager to set aside sufficient reserves to preserve property quality. Further, the risk of loan default increases when cash flow does not cover the cost of capital items. Our analysis might consider replacement reserves in combination with projected maintenance and repair expenses to assess whether the pool has adequate funds to preserve property quality and service the loan debt. We base our assessment of replacement reserves on location, age of the property, and the extent of renovations. In general, lower-value SFR properties tend to have shorter useful lives than higher-value properties. Also, older properties are likely to require greater maintenance expenses. Our assessment of replacement reserves might reflect whether the properties have previously undergone significant renovations. However, if information suggests the likelihood of deferred maintenance for which no reserve has been collected, we adjust our estimates of the proceeds from sales of the underlying properties.

SECTION 8 CONSIDERATIONS

We consider the portion of the pool whose tenants receive government housing assistance through the Housing Choice Voucher Program under Section 8 of the Housing Act of 1937. Under the Section 8 program, if a property qualifies, the manager may rent it to tenants who receive a portion of their rent from the US federal government. We do not expect to make any adjustments if the portion of the pool consisting of Section 8 tenants is *de minimus*. Where there is a significant portion of properties with Section 8 tenants, we consider a small reduction to bad debt and vacancy rates because Section 8 properties often have lower tenant defaults and vacancy rates than non-Section 8 properties, given the large portion of rent paid by the US federal government and the high demand for qualifying properties by Section 8-eligible tenants.

We may also consider a small increase in repair and maintenance costs because these costs are often higher for Section 8 properties, due to the strict upkeep standards and the regular inspections that the US Department of Housing and Urban Development requires to enforce those standards.

Additionally, in our recovery value analysis, we consider whether a high concentration of Section 8-eligible properties in any particular geographic area might negatively affect property values.

Term Risk Analysis for Granular Multi-Borrower SFR Pools

Our term risk analysis for multi-borrower transactions focuses on the lender's underwriting guidelines. More specifically, we assess how underwriters determine debt service – for example, in DSCR, NOI or other constraints – which we then use to form our basis of term risk analysis for diversified multi-borrower pools. For loans with underwriting guidelines that may not conform with DSCR/NOI-based standards, we consider the debt service in comparison to the property's income-generating potential. Since we base our analysis on underwriting guidelines, we typically only apply it when a multi-borrower transaction has hundreds of independent loans.

Recovery Value Analysis

Overview

The portion of the properties that we subject to liquidation stress depends on the nature of the portfolio, the sponsor, the target rating and any available sector performance data. If the sponsor repurchases any property from the trust, the property will not be subject to market value risk in a liquidation scenario. In our analysis, as part of assigning high investment-grade ratings, we assume that repurchases by the sponsor are minimal. The expected quality of the properties' upkeep during the term of the loan(s) also bears on the recovery analysis. The size and expertise of the property manager, the level of cash reserves escrowed for property management and property management-related covenants in the loan agreement are some of the critical factors we consider in evaluating the quality of property management.

For single-borrower SFR securitizations, although we expect the borrower to pay off the loan in full through refinancing, we nevertheless evaluate stress scenarios involving the liquidation of the properties. In such a scenario, if the borrower defaults on the loan, the servicer would sell the properties or the loan and distribute the proceeds to security holders according to the priority of payments. Since the repayment of the rated securities depends on the realization of market value for the underlying properties in a stressed environment, we also consider the time available between the loan maturity and the maturity on the rated securities (tail period).

We value the portfolio of SFR properties through an asset-level analysis based on various house price stresses rather than as a multiple of the portfolio's rental income. Additionally, if there is a high concentration of properties in a few markets, we expect greater price volatility and assume greater house price depreciation when determining recovery values from these properties than for diversified pools.

We derive a portfolio recovery value by applying an initial Moody's value to each property, stressing those values through various house price stresses, reducing the values further to account for expenses and then increasing the values to account for rental income.

In our recovery analysis for multi-borrower SFR transactions, we may provide credit for greater geographic diversity of the collateral backing those transactions. However, we often apply higher stresses to the recovery values for multi-borrower SFR transactions owing to the varying and potentially uncertain property management standards in these transactions.

Initial Moody's Value

We first assign an initial Moody's value to the properties. We base the Moody's value for each property on our analysis of: (1) the acquisition cost, partially adjusted for post-acquisition renovations and any house price appreciation/depreciation since the property's acquisition, and/or (2) the latest available third-party valuation of the property.

We adjust the acquisition cost by adding a fraction of the renovation costs and a fraction of the house price appreciation or the full depreciation to the price paid by the sponsor to acquire the properties. We apply the

renovation haircut because improvements usually do not generate a dollar-for-dollar increase in market value. We consider renovation costs to include actual improvements to the properties, and not “soft costs,” such as payment of past taxes and insurance, carrying costs, maintenance expenses and potential administrative overheads.

If we expect that adjusted acquisition prices are no longer a good indication of current market value or are not available, our initial Moody's value will be driven by the latest available third-party valuation of the property, with some discount depending on the type and quality of the valuation and house price trends. We may rely on third-party valuations if, for example, there is a long period between the property's acquisition and its inclusion in an SFR securitization. Other examples include a scenario in which the property is acquired as part of a bulk portfolio acquisition, or if only a part of the portfolio's acquisition cost is allocated to the property, especially if only a part the bulk portfolio is securitized.

We adjust the property values based on a qualitative assessment of the valuation provider and the method and scope of valuation used, as well as the potential discount in the sale price that may result from selling the property in a distressed market. For example, we consider an appraisal by a licensed appraiser (“full appraisal”) to be more reliable than a broker price opinion (BPO). Hence, we typically apply a higher haircut to BPO valuations than full appraisals. In determining an appropriate valuation haircut, we consider, among other factors, the capabilities of the valuation provider, available comparisons between the valuations and recent sales data, and for BPOs, the results of any full appraisals for a sample of BPOs. We review a third party's assessment of the reliability of a sample of such valuations. The third party compares the valuations to the recent history of home sales (see the “Third-Party Reviews” section).

We may also adjust our initial Moody's value based on market indicators. For example, if we expect that market measures indicate acquisition costs and valuations are rising too rapidly, we may cap our initial Moody's value. When we evaluate this additional dimension, we may consider rent-to-price ratios in particular geographic areas, comparisons of the subject property value to national indices, and comparisons of debt yield or capitalization rates from transaction to transaction. We may also make transaction-specific adjustments based on the information presented.

Stressed Value

We apply a house price depreciation (HPD) stress to our initial Moody's value to account for a scenario in which the securitization trust must sell all or a substantial portion of the portfolio in a distressed market. As a starting point for our Aaa HPD stress assumptions, we apply a stress similar to the one applicable to a portfolio of US residential mortgage loans under our approach for rating US RMBS.²

Our HPD stresses consider the degree of geographic concentration across the underlying properties. We adjust our house price decline scenarios based on the effective number (measured as the inverse of the Herfindahl-Hirschman Index) of metropolitan statistical areas (MSAs) represented in the portfolio. The higher the concentration (or the lower the effective number), the greater the house price decline. High geographic concentrations in a portfolio are the result of a large proportion of properties located in a particular MSA. High geographic concentration exposes a portfolio to the risk of higher losses if economic conditions in a particular MSA deteriorate materially, which effectively increases the probability of high losses. We also subjectively evaluate state concentration. For SFR transactions, especially those concentrated in a few MSAs, we examine the historical peak-to-trough HPD distribution for those MSAs represented in the pool. We also consider forecasts for future depreciation that may be available.

² For more information, see our methodology that describes our approach to rating US RMBS. A link to a list of our sector and cross-sector methodologies can be found in the “Moody's Related Publications” section.

In general, we apply greater HPD stresses to less diversified pools. We may also adjust the HPD stresses we apply based on a qualitative consideration of transaction parties' expertise and incentive alignment.

Expenses

The properties will incur various costs and expenses until they are sold, including property maintenance expenses, liquidation costs and servicer advance reimbursements. Some of these expenses depend on liquidation timelines. We stress liquidation timelines according to geography (judicial/non-judicial foreclosure state) and rating category. In multi-borrower SFR transactions, we may stress expenses on a loan-level basis, given the potentially varying standards of property management ranging from smaller, less experienced to larger, more sophisticated managers.

- » **Property maintenance expenses.** The expenses required to maintain the properties in the pool after loan default include real estate taxes, property management fees, HOA fees, insurance and repairs. The amount of these expenses depends on how long the trust owns the properties before it liquidates them. It also depends on the expected upkeep standards. As an example, for multi-borrower SFR transactions where there is no reserving of cash for property maintenance, we may assume a value that is higher than for a transaction where cash is escrowed for property management. We also evaluate the level of cash escrowed for maintenance.
- » **Liquidation costs.** Liquidation expenses include foreclosure costs and other legal costs, servicing fees as a percentage of the loan amount, a special servicer liquidation fee as a percentage of property value, and sales and marketing costs. The longer the foreclosure period, the higher the costs. We also assume legal costs, stressed by rating category, to account for the risk that the borrower and/or its corporate family challenge the trust's liquidation of the properties following their bankruptcies.
- » **Servicer advance reimbursement.** Recouping the servicer's debt service advances on the loan will reduce the amount recovered from liquidating the properties. We generally assign investment-grade ratings only if the servicer must advance principal and interest (to the extent deemed recoverable) on the loan until the special servicer liquidates the properties. We calculate and apply the servicer advance amount and interest on servicer advances in our liquidation analysis. In the absence of servicer advances, we conduct a liquidity analysis before assigning investment-grade ratings
- » **Liquidation timelines.** The time necessary to liquidate the properties depends on the method the special servicer, on behalf of the trust, uses to take control of the properties: either a foreclosure on the equity pledges or a foreclosure on the mortgages. An equity pledge foreclosure will, in most cases, be quicker than a mortgage foreclosure.
 - **Equity pledge foreclosure:** If the loan defaults, then the special servicer, on behalf of the trust, can take ownership of the borrower special purpose entity (SPE) by foreclosing on the equity pledges. The special servicer can then direct the borrower to sell the properties. A foreclosure of the equity pledges requires a single action under the Uniform Commercial Code. We assume that an uncontested equity foreclosure will generally take a number of months, while a stressed contested equity foreclosure could take considerably longer.
 - **Mortgage foreclosure:** If the collateral includes mortgages, then the special servicer can foreclose directly on the properties. Unlike the equity pledge foreclosure, which requires a single action, mortgage foreclosures require multiple actions, at least one for each county that includes properties. By foreclosing on a mortgage, the trust either becomes the owner of the properties and the special servicer can sell them or, if there is an acceptable cash bid at a foreclosure sale, receives the cash in exchange for the related properties.

Foreclosure timelines depend on whether the county is in a judicial or non-judicial foreclosure state and on the specific procedures and issues in that state or county. Although judicial

foreclosures generally take longer than non-judicial foreclosures, the process will likely be expedited compared with traditional residential foreclosures because the actions apply to a commercial entity rather than individual homeowners. Therefore, the consumer protections that often extend the foreclosure process and increase foreclosure costs do not apply.

- » **Timeline assumptions.** Under our Aaa to A3 stress scenarios, we generally assume the trust will need to pursue the longer and costlier mortgage foreclosure method; under our Baa1 and lower stress scenarios, we generally assume the trust will pursue the quicker equity foreclosure method. However, in an actual default scenario driven by economic outcomes, the servicer will likely pursue equity foreclosure or other loss mitigation strategies, such as a loan sale or workout, to maximize recovery value. Timelines may be shorter for a multi-borrower transaction where a given borrower does not have the size to negotiate with or influence actions of a servicer.

Rental Income Credit

We assume that some of the underlying properties will continue to be rented out while awaiting liquidation and that the rest remain vacant. Our assumptions vary based on rating category.

Final Recovery Value

The final recovery value is the stressed value reduced by the expenses and increased by the rental income.

The following is a simplified hypothetical example showing the components of the recovery analysis. Haircuts, credits and house price depreciation stresses will depend on the specifics of the transaction, the quality of property management, the geographic distribution of the pool, and the position in the credit cycle.

EXHIBIT 2

Components of Recovery Calculation

= B / A	Recovery Rate	50.0%
A	Initial Moody's value	\$100.00
B	Stressed recovery value at refinancing	\$50.00
Assuming A = MIN (C, I)	Initial Moody's Value ¹	\$100.00
C = D + (E * F) + (G * H)	Total cost	\$100.00
D	Acquisition cost	\$80.00
E	Renovation cost	\$20.00
F	Renovation credit	50%
G	House price appreciation (HPA)	\$20.00
H	HPA credit	50%
I = J * (1 - K)	Property valuation	\$102.00
J	Initial third-party property valuation	\$120.00
K	Valuation haircut	15%
B = M + N - R	Stressed Recovery Value at Refinancing	\$50.00
L	House price depreciation stress	40%
M = A * (1 - L)	Stressed house price value	\$60.00
N = O * (1 - P) * Q	Gross revenue	\$18.00
O	Monthly rent	\$1.00
P	Vacancy rate	25%
Q	Rental period (in months)	24

EXHIBIT 2

Components of Recovery Calculation

= B / A	Recovery Rate	50.0%
$R = (S * X) + Y$	Total expenses	\$28.00
$S = T + U + V + W$	Monthly expenses	\$0.50
T	Real estate taxes	\$0.10
U	Property management fee	\$0.07
V	Capex reserves	\$0.03
W	Other	\$0.30
X	Expense period (in months)	36
Y	Other expenses (servicer advances, foreclosure costs, other one-time expenses)	\$10.00

1. If we expect adjusted acquisition prices are no longer a good indication of current market value, the Moody's value may simply be the latest available third-party valuation of the property.

Note: We may adjust the stressed recovery value upward for the proportion of the pool sold before the maturity date and therefore not subject to a distressed liquidation.

Source: Moody's Investors Service

Loan Structure

We analyze the following features in loans backing SFR transactions.

Cash Management

We evaluate the cash management arrangements in SFR transactions, which typically require the borrower to cause all rent and other collections, regardless of form, to be deposited into a rent deposit account under the lender's control within a short period, e.g., three business days, after receipt. The borrower may have limited rights to withdraw a small percentage of the rents from the rent deposit account for particular and limited purposes, such as refunding tenants' partial payments to preserve eviction rights.

We also review cash management triggers, which cause amounts of cash that exceed the annual operating and capital expense budget, as well as extraordinary operating expenses approved by the servicer, to be trapped as cash collateral or used to pay certain property related expenses. In SFR securitizations, DSCR triggers are commonly used for fixed-rate loans and typically set at 1.20x, whereas debt yield triggers are commonly used for floating-rate loans and typically set at 85% percent of the closing debt yield.

For loans with weaker cash management structures, such as the absence of a lender-controlled deposit account established at closing, we may model a loss of some rent upon loan default.

Amortization

We evaluate the planned amortization of SFR loans. Amortization offers some key benefits in a transaction including the reduction of leverage (LTV), alignment of interest, and the buildup of credit enhancement. These credit benefits also improve a given loan's refinancing prospects.

Reserves

We evaluate reserve requirements in the loan agreements which typically require the borrower to establish reserves for taxes, insurance, HOA fees, and replacements. For example, on each payment date the borrower should deposit a specified amount with the lender, such as one-twelfth of the insurance premiums and property taxes that the lender estimates will be due over the next 12 months.

Replacement reserves (also called capex reserves) are intended to cover one-off expenses, such as the replacement of a roof or HVAC system. They are not intended for day-to-day maintenance or for costs related to tenant turnover (such as painting interior walls).

Therefore, we consider the level of reserves in the context of the sponsor, underlying borrower(s) and the underlying portfolio. A transaction's dependence on a sponsor/operator is reduced as the level of cash reserves increases.

Longer-Term Loans

Longer-term loans, such as those with 10-year terms, have both benefits and risks relative to shorter-term loans. Depending on the position in the real estate and economic cycle, the benefits of a longer-term loan could include a reduction in the refinancing risk in the case of a down cycle during the term, and the release of properties at a premium during an up cycle, providing over-collateralization to the transaction. Another benefit of longer-term loans is that they can build more equity if house prices appreciate on average over the loan term; furthermore, if amortization is a feature of the loan, such amortization would also reduce the principal balance. However, these benefits could be outweighed by the risk of greater uncertainty of house prices, a higher probability of an adverse economic shock, and a higher risk of default for the sponsor. Further, as properties age, their condition deteriorates, which could lead to higher expenses associated with their maintenance and repair. We weigh these benefits and risks when determining advance rates.

Fixed vs. Floating-Rate Loans

Compared with fixed-rate loans, floating-rate loans have additional risk associated with potential interest rate increases during the loan term. In determining the sustainability of rental cash flow in servicing the loan debt, we analyze the breakeven reduction of NCF required to cover debt service.

Interest rate caps during the loan term help offset floating-rate risk, but do not completely eliminate it. Our assessment of interest rate caps considers that interest rate caps covering the tail period post maturity are not common; as such, we vary our interest rate assumption during the recovery period upon liquidation of the properties. Also, the counterparty risk of the cap provider affects the cap's strength. For rate caps that are part of the loan agreement, we consider the risk mitigated if the loan agreement requires the cap counterparty to meet the minimum ratings set forth by our methodology for assessing counterparty risks in structured finance transactions.³

HOA Super Liens

We take into account whether transactions have provisions to monitor the payment of HOA and condominium association fees so that lien foreclosures for these fees do not impair the transaction's mortgage lien on the related properties or reduce the property values.

Property Substitution

Some transactions allow the sponsor some flexibility that can lead to a change in the underlying portfolio's composition. Any such latitude for the sponsor brings potential for adverse selection. We evaluate a sponsor's flexibility in the context of protections that may be built into the transaction's structure.

Full Recourse/Small Loans

Full recourse and small loans in multi-borrower transactions typically are made to borrowers that are not financially strong. For such loans, we typically apply an adjustment in which we increase the loan probability of default.

³ For more information, see our methodology for assessing counterparty risks in structured finance transactions. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Structural Analysis and Liability Modeling

In this section, we explain how we analyze the structural features of an SFR securitization, including how we model and allocate cash flows to different classes of securities, taking into account asset cash flows and available credit support.

Advance Rate

As described in our recovery value analysis, for single-borrower SFR securitizations the "advance rate" for any rating category is:

- » the final stressed recovery value for that rating category divided by
- » the aggregate initial Moody's value.

The advance rate represents the portion of the loan that we rate in the particular rating category. We may further adjust the advance rate to account for qualitative factors.

For multi-borrower transactions, we evaluate probability of default under a Aaa stress scenario. In this scenario, the correlation for the loans is reflected through a modeling assumption that all the loans in the portfolio are subjected to the same macroeconomic stress simultaneously. Despite subjecting all the loans in the pool to the same level of macroeconomic stress, we may model further correlation between loan performance under a Aaa stress. Typically, we consider pools with independent and effective loan count of greater than 175 as diversified, and we do not model this additional residual correlation.

The following table summarizes the indicative advance rates when we assign initial ratings for various rating categories for a single-borrower SFR transaction. We calculate the advance rate as a fraction of our initial Moody's value, which itself is lower than the underlying portfolio's appraised value. Additionally, the actual advance rate may deviate from the range specified below depending on the sponsor and collateral characteristics.

Once we have assigned ratings to the securities, the advance rate as a fraction of a re-estimated Moody's value – driven by any change in the transaction's performance or house price trends – may be outside these ranges.

EXHIBIT 3

Indicative Advance Rates for Different Rating Categories

Rating Category	Range of Indicative Advance Rates
Aaa	40%-55%
Aa	45%-60%
A	55%-70%
Baa	65%-75%

Source: Moody's Investors Service

Capital Structure

Our analysis accounts for the cash flow and loss allocation structure set forth in the transaction documents. We expect that in most cases the trust distributes interest and principal payments on the pooled trust securities sequentially, and allocates realized losses and shortfalls in reverse sequential order. We expect that increases in credit support are realized through the application of principal payments, and decreases in

credit support are driven by realized losses. A deviation from such a structure could require the application of alternative stress scenarios and/or cash flow modeling.

Other Considerations

Along with our asset, structural and liability analysis, we consider other quantitative and qualitative factors in our credit analysis, such as transaction counterparties, other legal risks, reliability, and completeness of historical and portfolio data, and environmental, social and governance (ESG) considerations.

Counterparty Risks

We consider various counterparty-related risks at different stages throughout our credit analysis. More specifically, the risks we consider include operational risks, commingling risk, and account bank risks.⁴ Based on our review, we may adjust our assumptions, inputs or model results. If information is limited, we may also adjust the rating level.

Property Manager and Servicers

Property Manager

Our analysis of SFR transactions includes a quality assessment of property management. Property managers are responsible for all aspects of operations including rent collections, renovations, repairs, leasing, marketing, tenant screening, tenant services, compliance, safety, and general preservation of the collateral's condition. Property management, therefore, affects revenues, expenses and property value.

For single-borrower SFR securitizations, the sponsor or affiliate of the transaction sponsor, or in some cases third-party property managers with varying degrees of control, handle the property management. We assess the quality of property management as part of a sponsor's operational review for single-borrower SFR transactions.

In multi-borrower SFR transactions, multiple property managers with varying experience and expertise manage properties, so the quality of property management could vary from loan to loan. Depending on the number of property managers and properties managed for each loan, we review a small sample of the property managers or conduct an assessment by reviewing the property manager selection criteria and eligibility questionnaires. For multi-borrower SFR transactions, where property management is typically less transparent, we generally model the risk of loss of some rent upon default for loans with borrower-affiliated property managers.

The presence of several property managers, each with strong experience in a region or regions managing the property portfolio, could reduce operational risk in the absence of a single property manager with strong experience in all of the regional markets. Similar to the master servicer in RMBS transactions, an experienced master property manager could oversee and effectively coordinate with several regional property managers.

Transactions with Multiple Borrowers

For SFR transactions with multiple borrowers, credit quality depends heavily on the quality and consistency of the transaction sponsor's operations and flow of information. A lack of standardized property

⁴ For more information, see our methodology for assessing counterparty risks in structured finance transactions. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

maintenance and information reporting among a transaction's borrowers could result in uncertainty about the loan performance in the portfolio and the condition of the properties backing the loans.

Furthermore, the quality of information that a lender provides on its underwriting practices and business model is critical for multi-borrower SFRs. As the number of borrowers increases in a transaction, the likelihood of loan default depends more on the underwriting standards.

Operational Review

When assigning the initial rating to the securities in a single-borrower SFR transaction, we review the sponsor's and/or property manager's, if appropriate, operations to evaluate their capabilities regarding the following:

- » marketing and attracting potential tenants, tenant underwriting and responding to tenants' requests
- » analyzing the market, investment decision process, and acquisition and/or disposition strategy
- » technology systems
- » tracking and controlling repairs and maintenance costs, as well as maintaining and improving property condition
- » supervising and training employees
- » managing third-party service providers
- » establishing and enforcing corporate policies and procedures
- » maintaining all licenses and permits
- » creating and maintaining reporting systems, including financial controls
- » complying with all housing rules and regulations
- » corporate governance and executive experience
- » disaster recovery and backup systems

Beyond this initial review, the sponsor generally provides yearly audited financial statements, as well as several stipulated company-wide performance metrics.

Our sponsor and/or property manager review influences the assumptions we use to determine future rental income or recovery value as well as the overall qualitative judgment of the rating committee. For example, we could increase the expected vacancy rate for weaknesses in marketing or maintaining properties, or decrease initial property values for weaknesses in property valuation.

Alignment of Interest

In general, it is credit positive if the sponsor/manager retains a substantial financial interest in the transaction to ensure that its interests align with those of investors in the rated securities. For example, in single-borrower SFR transactions, such alignment occurs if the sponsor owns the borrower SPE, which owns the underlying properties, and retains meaningful equity in the properties. We consider the credit implications of other arrangements.

Transactions with Financially Weaker, Less Experienced or Smaller Operators

We could adjust our assumptions to account for considerations pertaining to financially weaker, less experienced or smaller SFR operators. Such operators can introduce more operational nuances into SFR transactions.

- » Operators with less financial wherewithal and limited access to capital have reduced financial flexibility that could increase an operator's risk of not performing its obligations in an adverse economic environment.
- » The lower financial flexibility could prevent these operators from making necessary expenditures for their platform, such as investing in technology, risk control and experienced personnel, which could hurt the ongoing maintenance of the properties.
- » Owing to economies of scale, smaller operators could use third-party property managers to manage their properties in certain markets. These property managers could lack the same alignment of interest as these operators in maintaining the properties.
- » The portfolio could be exposed to higher geographic concentration risk as smaller operators may limit their footprint to markets where they can achieve economies of scale.
- » Smaller operators could have higher operating expenses because of the use of third-party property managers and their inability to negotiate better pricing with third-party vendors for supplies and general contractors for property renovation.
- » Less experienced operators could have limited track records as property managers or supervisors of property managers. This could, for example, result in weaker tenant selection, higher vacancies, and weaker property maintenance.

Replacement of the Manager

We consider property manager replacement provisions, which typically allow a trust to replace the property manager for a given loan under certain conditions, such as:

- » An event of default occurs under the loan, (e.g., a failure to maintain debt yield or LTV covenants, subject to a cure period).
- » The manager is in material default under the management agreement beyond any applicable notice and cure period.
- » The manager becomes insolvent or a debtor in any bankruptcy or insolvency proceeding.

A capable backup operator engaged by the securitization at closing may mitigate the risks associated with a financially weak operator. For multi-borrower SFR transactions, backup property managers may find it easier to take over a geographically concentrated portfolio.

Servicers

Servicer

The servicer's primary responsibility is servicing and administering the loan. The servicer's responsibilities include advancing delinquent scheduled principal and interest loan payments (other than balloon payments) and other sums necessary to protect the property (e.g., real estate taxes and insurance), all to the extent that the servicer deems them recoverable. The servicer's advancing obligations are usually backed up by the transaction trustee. We consider the credit quality of the parties responsible for advancing which, in transactions backed by a single loan or a non-diversified pool of loans, are typically rated at least A2 or P-1. The servicer also administers the transaction collection and other accounts and receives monthly property-level information.⁵

⁵ For more information, see our methodology that describes our approach to assessing counterparty risks in structured finance, which sets forth criteria for servicers and trustees to support Aaa ratings. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Special Servicer

SFR transactions likely provide for a special servicer to manage the assets if the loan defaults. We consider the special servicer's experience managing residential property disposition, as well as their servicing expertise (either directly or through an affiliate). A special servicer may need to work with other real-estate-owned (REO) disposition companies and property managers to service the portfolio.

Since the special servicer plays a critical role in a distress scenario, we also qualitatively evaluate the market for special servicing arrangements.

Legal Risks

We assess legal risks that may affect the expected losses posed to investors. In particular, we consider the potential legal consequences of whether the issuer is bankruptcy remote. We review legal opinions at closing to inform our views on the key legal risks identified in a transaction. In Appendix A ("Loan-Level Legal Risks in Single-Borrower SFR Securitizations"), we describe the typical loan-level legal risks that we assess in single-borrower SFR transactions.

Collateral: Mortgages and Equity Pledges

First lien mortgages on the underlying properties provide a strong legal foundation and make the sales proceeds from underlying properties available to the SFR securitization under different scenarios, including sponsor bankruptcy. Absent a senior-ranking mortgage lien, we evaluate the risk of: (1) the SFR securitization not having senior rights to the properties following a sponsor or borrower bankruptcy, (2) the sale of the properties without lender's consent, and (3) other liens trumping the SFR securitization's claim on the properties.

The absence of mortgages would leave the SFR securitization exposed to the risk of losing its first-priority rights to the properties following a sponsor bankruptcy and successful substantive consolidation of the borrower with the sponsor. Although in our view it is unlikely that a court would order a substantive consolidation, creditors would have a strong incentive to pursue such a consolidation because, if successful, they would share in the value of the entire asset pool. Without mortgages, the credit quality of the structure would not likely be strong enough to support securities with a rating higher than Baa, absent strong mitigating factors such as a highly rated sponsor.

Conversely, mortgages, in addition to the equity pledge, allow for higher ratings on the securities because mortgages protect the SFR securitization's first-priority rights to the properties, even following a sponsor bankruptcy and successful substantive consolidation, and therefore act as a powerful deterrent to creditor challenges.

Bankruptcy Remoteness of the Issuer and True Sale Considerations

We analyze whether the issuer is bankruptcy remote such that the likelihood of (1) a bankruptcy filing by or against it; or (2) substantive consolidation – that is, the pooling of the issuer's assets and liabilities with those of a bankrupt affiliate – is so low that it has no rating impact.⁶ If we determine that the issuer is not bankruptcy remote, we assess the potential rating impact on a case-by-case basis according to the likelihood of bankruptcy and the possible negative consequences for investors.

As part of our analysis, we will also review true sale opinions to confirm that in a bankruptcy proceeding of the loan seller or the depositor, the loans would not be considered property of the seller's or depositor's, as applicable, bankruptcy estate, nor that the automatic stay would attach to loan payments. Similar

⁶ For more information, see our cross-sector methodology for assessing bankruptcy remoteness in structured finance. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

considerations and analysis may apply to pre-securitization transfers by affiliated entities that owned the loans before the loan seller.

We expect securitizations also to have a backup security interest in the loans that discourages creditors from challenging the transaction's structure. Even if a challenge is successful and the securitized loans are considered part of the seller's or depositor's bankruptcy estate, the creditors would accomplish little because they would be in an unsecured position.

Representations and Warranties

Representations and warranties for single-borrower SFR transactions are typically similar to those of single-borrower, multi-property CMBS transactions. If they differ, we assess the credit impact case-by-case.

For example, the loan seller will make limited representations and warranties to the trustee (for the certificate holders' benefit) concerning the loan to the depositor. A material breach of any representation typically requires the seller to cure or repurchase the loan at par. These representations and warranties generally cover, among other aspects, the seller's ownership of the loan and collateral, the absence of liens, and compliance with real estate mortgage investment conduit rules.

We consider the representations and warranties that the borrower makes in the loan agreement, which typically cover, among other aspects, the title to the properties, the presence of insurance, the presence of the deeds, the condition of the properties, and compliance with laws. We also consider the consequences of breaches of the representations and warranties. A material breach of any of the borrower representations and warranties relating to the properties typically requires the borrower to cure the breach, buy out the property at a price equal to its allocated loan amount, or substitute the property with an eligible property. Failure to do so would cause an event of default under the loan. For multi-borrower SFR transactions, the seller may make such representations and warranties.

For multi-borrower SFR transactions, which involve multiple, unrelated borrower SPEs, we expect more extensive representations and warranties by the seller(s) of the loans to achieve investment-grade ratings.

Adjustments for Loan-level Legal Risks

Our analysis of SFR transactions focuses on loan-level legal issues that – considering the likelihood and impact in the event of occurrence – present a material risk to investors in such transactions.

SINGLE-BORROWER SFR SECURITIZATIONS

For each loan-level legal risk described in Appendix A, we assessed two factors, the likelihood of occurrence and possible impact. We combined these two factors to determine our legal risk assessment, as shown in the matrix in Exhibit 4. If we identify a material legal risk not mentioned in Appendix A when reviewing an SFR loan, we also assess it per Exhibit 4.

EXHIBIT 4

Legal Risk Assessment Matrix

	Possible Impact				
	Minimal	Minor	Moderate	Major	Severe
Highly Likely	Medium	Medium	Medium High	Medium High	High
Likely	Medium Low	Medium	Medium	Medium High	Medium High
Possible	Medium Low	Medium Low	Medium	Medium	Medium High
Unlikely	Low	Medium Low	Medium Low	Medium	Medium
Highly Unlikely	Low	Low	Medium Low	Medium Low	Medium

Source: Moody's Investors Service

Our legal risk assessment typically translates into a loan-level adjustment. Loan-level adjustments range from 0% to 2% of the loan amount per legal risk, as shown in Exhibit 5.

EXHIBIT 5

Legal Risk Assessment

Legal Risk Assessment	Individual Adjustment (% of Loan Amount)
High	2.0%
Medium High	1.5%
Medium	1.0%
Medium Low	0.5%
Low	0.0%

Source: Moody's Investors Service

For each loan, we assess whether any legal risks are present, particularly those listed in Exhibits 7 to 9. For each identified risk, we apply the corresponding individual adjustment as shown in Exhibit 5. We then sum individual adjustments and compare the aggregate adjustment to the ranges indicated in Exhibit 6 to derive the total adjustment as a percentage of the loan amount.

EXHIBIT 6

Total Adjustment

Aggregate Adjustment Ranges	Total Adjustment (% of Loan Amount)
Aggregate Adjustment \geq 6%	7%
$4.0\% \leq$ Aggregate Adjustment $<$ 6%	5%
$2.0\% \leq$ Aggregate Adjustment $<$ 4%	3%
$0\% <$ Aggregate Adjustment $<$ 2%	1%

Source: Moody's Investors Service

Lastly, we multiply the total adjustment by the loan's Moody's loan-to-value ratio (MLTV) to calculate the final loan-level legal adjustment to advance rates. We base the MLTV for this calculation on the underlying loan amount and the Moody's value. The adjustment is applied across rating levels.

For certain legal issues, we may be unable to assign or maintain ratings on the securities in a single-borrower transaction due to the legal issue's very high potential impact, including the possibility of the trust losing all, or nearly all, of the loan amount if the risk materializes. Such risks are not considered within the above matrix because the adjustments described in this section would be insufficient to account for such risks.

MULTI-BORROWER SFR SECURITIZATIONS

For multi-borrower SFR securitizations, we may apply a similar approach to assessing loan-level legal risks and may apply adjustments based on a sample review of loan documents for the borrowers in the pool. Also, we may reduce or not apply certain loan-level legal adjustments described in Appendix A when the loan amount is relatively small and the pool is well-diversified at a borrower or loan level.

Furthermore, we may adjust our analysis for loans that allow the lender full recourse to the borrower and/or guarantor to repay the loan. This provides a better incentive to the borrower to repay the loan, but it also increases the risk that the loan may be tied up in a borrower's or guarantor's personal bankruptcy.

Adjustments for Transaction-level Legal Risks

For transaction-level legal issues (such as bankruptcy remoteness concerns with respect to the issuer), we apply adjustments on a case-by-case basis, considering the likelihood and potential impact of the legal issue. In certain cases, such issues may raise ratability concerns.

Insurance

When evaluating property and casualty insurance coverage, we apply similar standards as we do in single-borrower, multi-property CMBS transactions. Specifically, we consider the insurance requirements in the loan agreements which typically require that all properties are insured under "special causes of loss" forms for the full replacement value. Loan agreements also typically require general liability and umbrella insurance in adequate amounts, and other customary coverages as prudent lenders may reasonably require. We also assess whether adequate coverage is provided against climate risks, including windstorm, earthquake and flood perils for all properties located in zones prone to such hazards. We examine blanket insurance policies for concentrations of properties in special hazard zones to determine adequacy of coverage and policy limits.

If we determine that loan documents include inadequate insurance standards, we may negatively adjust the advance rates of the Aaa and the Aa certificates.

Servicers are typically required to carry "force-placed" insurance on properties whose owners failed to obtain property and casualty insurance.

Third-Party Reviews

Given the large number of properties backing SFR transactions and the importance of accurate valuations, the use of independent and qualified third-party reviewers is credit positive because it provides an added layer of oversight.

Valuation

Where BPOs (rather than appraisals) are the primary source of initial property valuations, a third party can source the BPOs to ensure a degree of independence. The third party can also compare the BPOs to actual sales prices and perform market analysis to validate and reconcile the BPO values. Another third party will often review a sampling of BPOs. Such a review typically assesses whether the broker has chosen appropriate comparables. We would, for example, consider a randomly selected sample computed using at least a 95% confidence level (based on a two-tailed t-statistic), a 2% precision level and a 5% assumed error rate as an adequate sample. We review the results of this sample analysis to determine the degree of adjustment to the BPO valuation. We also consider the scope of the BPO in determining any adjustment to the BPO valuation.

Data Quality Evaluation

We assign ratings to securities issued by an SFR transaction when we determine the information provided by reliable sources is sufficient.⁷ We expect a third party to evaluate data quality on key information in the data tape such as rent payments, lease start and end dates, property acquisition costs, and renovation costs. This typically includes a comparison of the information on the data tape with source documents. We may adjust our model inputs based on the scope or the results of the data quality evaluation.

Data quality is also important throughout the life of an SFR transaction, as described in the "Monitoring" section.

Title and Deed Review

We expect that a third party will verify the accuracy of key information in the deeds, the title insurance and the mortgages. For example, we expect the deeds to list the borrower as the owner of the properties, the trust to have the benefit of title insurance on the properties and the mortgages' legal descriptions of the properties to match those in the deeds.

⁷ For more information, see our approach to evaluating data quality in structured finance transactions. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Environmental, Social and Governance

Environmental, social and governance (ESG) considerations may affect the ratings of securities backed by a portfolio of SFR loans. We evaluate the risk following our cross-sector methodology that describes our general principles for assessing these ESG issues⁸ and may incorporate it in our analysis.

Monitoring

In this section, we describe our approach when monitoring transactions.

We generally apply the key components of the approach described in this report when monitoring SFR transactions, except for those elements of the methodology that could be less relevant over time, such as the review of the legal structure.⁹

Trustee remittance statements and consolidated financial statements constitute the primary sources of information for transaction surveillance. The property manager also typically provides performance metrics and other data on a monthly, quarterly and annual basis, such as those listed in Appendix C, which we use to monitor transactions. If certain fields or data are not provided, we consider on a case-by-case basis and may apply more conservative estimates.

In reviewing the ongoing performance of the transactions, we monitor the key variables that determine NOI and NCF for a transaction. For example, where available, we consider vacancy rates, capex on properties and other variables in support of our analysis of NOI and NCF.

We also monitor a transaction's portfolio mix for any unexpected changes. Unexpected negative changes can result from unusual patterns in the properties that are released by a sponsor as contemplated by the transaction documents. We also evaluate, where available, changes in rent renewal, lease turnover rates, and time to re-rent.

Periodically, and consistent with the approach used at closing, we continue to analyze the sufficiency of the estimated proceeds from the sale of the underlying properties to repay the principal balance of the rated securities and any remaining transaction expenses. As time passes, we increasingly factor in house price trends for the properties in the portfolio and the collateral performance. For example, a substantial decline in property values could lead to a downgrade. Conversely, we consider upgrading ratings of securities if, for example, properties underlying the portfolio appreciate substantially.

For multi-borrower SFR transactions, we analyze performance information in a similar manner to single-borrower SFR transactions. However, in multi-borrower SFR transactions, credit quality depends heavily on the quality and consistency of the transaction sponsor's operations and flow of performance information. A sponsor, working with other parties, can help ensure that the performance information the borrowers supply is timely and consistent in content and format. We expect to see such information both at closing and throughout the transaction term to monitor such transactions.

⁸ A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

⁹ For example, in methodologies where models are used, modeling is not relevant when it is determined that (1) a transaction is still revolving and performance has not changed from expectations, or (2) all tranches are at the highest achievable ratings and performance is at or better than expected performance, or (3) key model inputs are viewed as not having materially changed to the extent it would change outputs since the previous time a model was run, or (4) no new relevant information is available such that a model cannot be run in order to inform the rating, or (5) our analysis is limited to asset coverage ratios for transactions with undercollateralized tranches, or (6) a transaction has few remaining performing assets.

Appendix A: Loan-level Legal Risks in Single-Borrower SFR Securitizations

Exhibits 7 to 9 list loan-level legal risks in single-borrower SFR securitizations. The risks relate to borrower entity, non-recourse carve-out guaranty/guarantor, and borrower representations and covenants issues. The exhibits also provide the legal risk assessment we assign to each issue in a single-borrower SFR securitization. For a typical SFR transaction, we review if any of the legal risks in this list exist.

If there is a legal issue for a loan which requires an adjustment and which is not listed in Exhibits 7 to 9, we assess the legal issue on a case-by-case basis. We assign a likelihood, impact, and legal risk assessment based on reviewing the specific credit negative clauses and availability of potential mitigants. However, certain material legal deficiencies may lead us to assign zero credit to a multi-borrower loan in our analysis, or in the case of a single-borrower transaction, not assign ratings.

EXHIBIT 7

Borrower Entity

Category	Legal Issue	Legal Risk Assessment
Limited Purpose	The borrower's permitted activities are not limited to owning and operating the property. The borrower lacks typical restrictions such as those related to incurring additional debt (subject to customary exceptions), liquidating its assets, dividing into multiple entities, dissolving, merging into another entity, and amending its organizational documents.	Medium
Separateness Covenants	The borrower does not have appropriate separateness covenants.	Medium High
Bankruptcy Remote Structure	The borrower (and any permitted transferees) does not have bankruptcy-remote features similar to the following: (i) has an independent manager sourced from a nationally recognized corporate services provider whose vote is necessary for bankruptcy filings and similar actions and who cannot be terminated without cause and prior notice to the lender, (ii) has waived any fiduciary duty of the independent manager to the borrower's equity ownership and its corporate family, and (iii) is structured as a Delaware LLC or as an entity controlled by a Delaware LLC.	Medium High
Weak or No Non-Consolidation Opinion	Weak or no non-consolidation opinion.	Medium High
Recycled Borrower	Borrower entity was formed before the subject loan was originated, and loan documents do not include proper "look-back" representations and warranties.	Medium

Source: Moody's Investors Service

EXHIBIT 8

Non-Recourse Carve-out Guaranty/Guarantor Issues

Category	Legal Issue	Legal Risk Assessment
Missing or Very Weak Non-Recourse Carve-out Guaranty	There is no third-party guaranty which provides for full recourse for bankruptcy (or other insolvency events), or there is a guaranty, but liability under the guaranty is limited to less than 10% of the loan balance (via either a cap on guaranty liability or a minimum net worth (NW) covenant of the guarantor). [*] Exception: No penalty for liability limited to below 10% due to a missing or low NW covenant if the guarantor is a top-level entity of an institutional-quality sponsor (e.g., the operating partnership of an investment grade or major REIT) or an institutional quality real estate fund.	High
Weak Non-Recourse Carve-out Guaranty	There is a third-party guaranty, but liability is limited to between 10% and 30% of the loan balance (via either a cap on guaranty liability or a minimum NW covenant of the guarantor). Exception 1: No penalty if the guaranteed amount is \$100 million or more. Exception 2: No penalty for liability limited to between 10% and 30% due to a low NW covenant if the guarantor entity is a reputable institutional-quality sponsor (e.g., the operating partnership of an investment-grade or major REIT) or an institutional-quality real estate fund.	Medium

^{*} We would also typically consider a NW covenant to be very weak if the loan agreement does not consider the breach of the NW covenant under all circumstances to be an event of default.

Source: Moody's Investors Service

EXHIBIT 9

Borrower Representations and Covenants

Category	Legal Issue	Legal Risk Assessment
Transfers	The borrower can transfer, without lender consent, (i) the property, or (ii) 100% of the equity interests, or (iii) operational control to a transferee with thresholds that are inadequate in light of the financial position and experience of the current sponsor.	Medium Low

Source: Moody's Investors Service

Appendix B: General Information Typically Provided for SFR Transactions

Operator Information

- » **Information about the operator** including its role in the transaction; experience; the characteristics and performance of its portfolio; expertise with the different local markets, local laws, and ordinances.
- » **A review of the operator's performance**, its experience and ability to perform its role in the transaction, including the percentage of the portfolio that the operator was able to rent out, tenant default rates, re-leasing periods, the yield the operator earned, the costs incurred, and the capital gains on sold properties.
- » **An explanation of the operator's strategy** and an evaluation of its operations, information technology systems, and finances.
- » **A discussion about the operator's ability to manage tenants and to maintain and market properties**, as well as its experience managing third parties.

Property-Related Information

- » **Information on expenses** including re-leasing costs, maintenance costs, recurring expenses associated with the property, property management expenses, and expenses to prepare the properties for rental.
- » **Selection criteria for the properties.**

Rent Information

- » **Description of the rental market in relevant areas** including the history of rental rates, renewal rates, average marketing time, cap rates, vacancy rates, and historical expenses.
- » **Detailed information on properties in the pool** including identification of properties in the securitization that the owner already rents out; location; lease expiry date; current and estimated rents on all properties; concessions on the properties; security deposits related to each property; time needed to re-rent; next best offer received, if available; market rents in the area (low, median, high); vacancy rates in the area; average time to rent the properties; and details on rent-controlled or rent-stabilized properties, or properties with other rent restrictions or covenants that accompany the title.
- » **Description of the condition of the properties** at the time of securitization, including information on any renovations or permissions needed after securitization, as well as any prior claims on the properties.
- » **Guiding principles behind rental agreements** including the length of the lease; obligations of and representation by the property owner and tenant; rental terms and conditions, including any options for the tenant or owner (e.g., tenant purchase options); and rental insurance requirement and breakup fees.
- » **Criteria for qualifying tenants and tenant application data.**

Property Value Information

- » **Valuation for each property.**
- » **Purchase price of each property**, and renovation and remodeling expenses incurred since purchase.
- » **Independent third-party review of valuation.**
- » **Available engineering reports** and reports pertaining to environmental conditions.

Transaction Information

- » **Type of transaction** including term, revolving facility, or master trust.
- » **Transaction structure** such as amortizing, bullet, or balloon payment structure; for bullet or balloon structures, an explanation of the repayment mechanism; expected and legal final maturity of the securities; and debt service coverage and LTV ratios.
- » **Legal structure of the transaction** and tax consequences.
- » **Property ownership information.**
- » **Description of cash flow waterfall, triggers, and other structural mechanisms** including reserve funds, liquidity reserve, credit enhancement, over-collateralization, allocation of excess cash, turbo feature, credit enhancement floor, triggers, and specific features.
- » **Transaction parties and their roles** including an indication of whether there is a single national operator or multiple regional operators in the transaction; if the transaction owns mortgages instead of properties, then additional information on borrowers and mortgage loans.

Lender Information in Multi-Borrower Transactions

- » loan sourcing/sales and marketing practices
- » underwriting policies and processes
- » typical borrower profile
- » property valuation policies and procedures
- » closing policies and procedures
- » quality-control and audit procedures
- » regulatory, legal, and compliance practices
- » management strength, strategies, and track records
- » technology
- » property management and reporting data/samples
- » alignment of interests

Appendix C: Example of Typical Information Used to Assign and Monitor Ratings for Single-Borrower SFR Securitizations

New Ratings

To issue a new rating and for substituted properties (in Excel format):

- » cut-off/substitution date
- » transaction name
- » property ID (Use property ID as of closing date)
- » property manager
- » third-party property manager
- » property address
- » city
- » ZIP code
- » MSA
- » county
- » state
- » acquisition date
- » acquisition type (MLS, trustee, short-sale, REO sale, mini-bulk, bulk or non-trustee)
- » property seller (if acquisition type is mini-bulk or bulk)
- » purchase price
- » hard cost
- » mixed cost
- » closing cost
- » other cost
- » total cost (post-rehab)
- » renovation complete – yes or no
- » renovation completion date
- » current property value
- » current valuation type (BPO (exterior), BPO (interior), full appraisal, exterior appraisal, AVM, house price index, or other)
- » current valuation index name
- » current valuation provider
- » current valuation date
- » property type
- » year built

- » total square feet
- » number of bedrooms
- » number of bathrooms
- » pool (yes or no)
- » current occupancy status (occupied or vacant)
- » number of days vacant
- » time to rent (months)
- » lease start date
- » lease end date
- » month-to-month (yes or no)
- » future lease start date
- » previous lease (yes or no)
- » vacant – previous lease start
- » vacant – previous lease end
- » original length of lease (months)
- » security deposit
- » Section 8 (yes or no)
- » actual contractual rent (annual)
- » previous actual contractual rent (annual)
- » underwritten rent (monthly)
- » underwritten GPR (annual)
- » underwritten other receipts (annual)
- » underwritten gross revenue (annual)
- » underwritten bad debt amount (annual)
- » underwritten concessions & concessions of free rent (annual)
- » underwritten vacancy (annual)
- » underwritten net revenue (annual)
- » underwritten repairs & maintenance (annual)
- » underwritten leasing & marketing expense (annual)
- » underwritten turnover expense (annual)
- » underwritten pool maintenance expense (annual)
- » underwritten property management fees (annual)
- » underwritten property taxes (annual)
- » underwritten HOA fees (annual)

- » underwritten insurance expense (annual)
- » underwritten other expense (annual)
- » underwritten net operating income (before capex) (annual)
- » underwritten capex reserve (annual)
- » underwritten net operating income (after capex reserve) (annual)
- » tenant delinquent (yes or no)
- » tenant delinquency stage (0-30 days, 31-60, 61-90 days or 90+ days)
- » actual delinquent amount (annual)
- » actual concessions & concessions of free rent (annual)
- » HOA (yes or no)
- » HOA contact information
- » HOA payment frequency (monthly, quarterly, semi-annually or annually)
- » actual HOA fees paid
- » HOA fees – delinquent amount
- » senior liens (yes or no)
- » title insurance on senior liens (yes or no)
- » substituted property (yes or no)

Monitoring Ratings on Existing Transactions

Trustee remittance statements, monthly property-level data, and operating statement analysis reports (OSARs) constitute the primary sources of information for transaction surveillance. The servicer also typically provides performance metrics and other data on a monthly, quarterly or annual basis, such as those listed in this appendix, which we use to monitor transactions. If certain fields or data are not provided, we consider on a case-by-case basis and may apply more conservative estimates.

Annually

- » sponsor's audited financial statements

Quarterly (in Excel format)

Portfolio comparison (for the top 10 MSAs and in the aggregate for all MSAs):

- » comparison between (a) the properties in the securitization and (b) the sponsor's properties, with respect to each of the following metrics:
 - number of residential home properties owned
 - most recent BPO and cost basis of assets
 - average age of assets in portfolio
 - current average monthly rent per asset
 - average renewal rate percentage during previous quarter
 - number of assets sold during previous quarter

Property information (aggregate for all properties)

- » reporting date
- » transaction name
- » gross potential rent (as defined in the loan agreement)
- » actual other receipts
- » actual gross revenue
- » actual delinquent amount
- » actual concessions
- » actual vacancy loss
- » effective gross income
- » actual controllable operating expenses
 - actual repairs and maintenance (including pool maintenance)
 - actual leasing and marketing expense
 - actual turnover expense
 - actual general and administrative expenses
 - actual total controllable operating expenses
- » actual non-controllable operating expenses
 - actual property management fee
 - actual property tax
 - actual HOA fees
 - actual insurance premiums
 - actual total non-controllable operating expenses
- » actual net operating income (before capex)
- » actual capital items
- » actual net cash flow (after capex)
- » actual debt service
- » actual net cash flow after debt service

Property valuation information (for each property):

- » reporting date
- » transaction name
- » property ID (as of cut-off date)
- » property manager
- » third-party property manager
- » property address

- » city
- » ZIP code
- » MSA
- » county
- » state
- » current, previous property value
- » current, previous property valuation type
- » current, previous valuation index name
- » current, previous valuation provider
- » current, previous valuation date

Quarterly HOA information at property level (in Excel format):

- » property ID
- » manager
- » property address
- » city
- » ZIP code
- » MSA
- » county
- » state
- » property in an HOA (yes or no)
- » HOA type
- » HOA name
- » number of HOAs
- » payment frequency
- » payment start date
- » most recent HOA payment due date
- » payment month(s)
- » 1st payment month
- » 2nd payment month
- » 3rd payment month
- » 4th payment month
- » periodic payment amount
- » annual dues
- » total estimated HOA dues

- » HOA fees due for such calendar quarter
- » HOA fees paid for such calendar quarter

Monthly

Property information (in Excel format):

- » reporting date
- » transaction name
- » property ID (as of cut-off date)
- » property manager
- » third-party property manager
- » property address
- » city
- » ZIP code
- » MSA
- » county
- » state
- » contractual rent
- » actual delinquent amount/aged receivables balance
- » actual concessions & concessions of free rent
- » actual HOA fee
- » current occupancy status (occupied or vacant)
- » previous occupancy status (occupied or vacant)
- » number of days vacant
- » number of days occupied
- » previous lease end date
- » lease start date
- » lease end date
- » section 8 (yes or no)
- » renewal/new lease (renewal or new)
- » month-to-month (yes or no)
- » previous month-to-month (yes or no)
- » tenant delinquent (yes or no)
- » tenant delinquency stage (0-30 days, 31-60, 61-90 days or 90+ days)
- » HOA – yes or no
- » HOA contact information (name)

- » HOA payment frequency (monthly, quarterly, semi-annually or annually)

- » next HOA payment date

Property sale information, including disqualified properties (in Excel format):

- » properties sold in the period

- » properties replaced in the period

- » substitute (new) properties in the period

- » sales price for any property sold

- » release price for any property released during the period

Moody's Related Publications

Credit ratings are primarily determined through the application of sector credit rating methodologies. Certain broad methodological considerations (described in one or more cross-sector rating methodologies) may also be relevant to the determination of credit ratings of issuers and instruments. A list of sector and cross-sector credit rating methodologies can be found [here](#).

For data summarizing the historical robustness and predictive power of credit ratings, please click [here](#).

For further information, please refer to *Rating Symbols and Definitions*, which includes a discussion of Moody's Idealized Probabilities of Default and Expected Losses, and is available [here](#).

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