S&P Global
Ratings

Research

Presale:

MFA 2020-NQM2 Trust

October 27, 2020

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Preliminary Ratings

Class	Preliminary rating(i)	Class type	Initial interest rate (%)(ii)	Preliminary amount ($)	Credit enhancement (%)(iii)
A-1	AAA (sf)	Senior	Fixed	405,397,000	28.90
A-2	AA+ (sf)	Senior	Fixed	17,676,000	25.80
A-3	A (sf)	Senior	Fixed	64,430,000	14.50
M-1	BBB (sf)	Mezzanine	Fixed	27,654,000	9.65
B-1	BB (sf)	Subordinate	Fixed	19,956,000	6.15
B-2	B (sf)	Subordinate	Fixed	15,110,000	3.50
B-3	NR	Subordinate	Net WAC	19,956,945	0.00
A-IO-S	NR	Excess servicing	(iv)	Notional(v)	N/A
XS	NR	Monthly excess cash flow	(vi)	Notional(v)	N/A
R	NR	Residual	N/A	N/A	N/A

Note: This presale report is based on information as of Oct. 27, 2020. The ratings shown are preliminary. This report does not constitute a recommendation to buy, hold, or sell securities. Subsequent information may result in the assignment of final ratings that differ from the preliminary ratings. (i)The collateral and structural information in this report reflects the private placement memorandum dated Oct. 21, 2020. The preliminary ratings address the ultimate payment of interest and principal. They do not address payment of the cap carryover amounts. (ii)Fixed coupons are subject to the pool's net WAC, and the interest rate on class B-3 equals the net WAC. (iii)This credit enhancement is solely from subordination, though excess spread also provides credit enhancement. (iv)Excess servicing strip (v)The notional amount equals the loans' aggregate unpaid principal balance. (vi)Certain excess amounts from the pool's net WAC over classes with fixed coupons. WAC--Weighted average coupon. NR--Not rated. N/A--Not applicable.

Participants

Issuer	MFA 2020-NQM2 Trust.
Sponsor and servicing administrator	MFA Financial Inc.
Depositor	MFRA NQM Depositor LLC.
Securities administrator and certificate registrar	Wells Fargo Bank N.A.
Servicer	Citadel Servicing Corp.
Trustee	Wilmington Savings Fund Society FSB.
Custodian	Wells Fargo Bank N.A.

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Participants (cont.)

Originator	Citadel Servicing Corp.

Originator

	By balance (%)	Due diligence (%)	Originator ranking
Citadel Servicing Corp.	100.00	100	N/A

N/A--Not applicable.

Servicer

	By balance (%)	S&P Global Ratings' select servicer	Operation	Originator
Citadel Servicing Corp.	100.00	No	Primary servicer	All loans

Rationale

The preliminary ratings assigned to MFA 2020-NQM2 Trust's (MFA 2020-NQM2) mortgage pass-through certificates series 2020-NQM2 reflect our view of:

- The pool's collateral composition (see the Collateral Summary section below),
- The credit enhancement provided for this transaction,
- The transaction's associated structural mechanics,
- The transaction's geographic concentration,
- The transaction's representation and warranty (R&W) framework,
- The mortgage aggregator and mortgage originator, and
- The impact the COVID-19 pandemic will likely have on the performance of the mortgage borrowers in the pool (see "Economic Research: The U.S. Economy Reboots, With Obstacles Ahead," published Sept. 24, 2020) and liquidity available in the transaction.

S&P Global Ratings acknowledges a high degree of uncertainty about the evolution of the coronavirus pandemic. The current consensus among health experts is that COVID-19 will remain a threat until a vaccine or effective treatment becomes widely available, which could be around mid-2021. We are using this assumption in assessing the economic and credit implications associated with the pandemic (see our research here: www.spglobal.com/ratings). As the situation evolves, we will update our assumptions and estimates accordingly.

Overview

MFA 2020-NQM2 is MFA Financial Inc.'s (MFA) second rated RMBS non-QM transaction. MFA purchased the mortgage loans from Citadel Servicing Corp., which originated and will also service the loans.

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Noteworthy Features

Loans in forbearance

On March 27, 2020, the CARES Act enacted COVID-19-related relief for borrowers with government-backed mortgage loans in the form of a temporary forbearance of up to 12 months of scheduled payments. While nonagency loans do not fall under the CARES Act as it relates to this forbearance, servicers have been granting forbearance plans to nonagency borrowers as well, typically with some variations to those of the CARES Act (e.g., timeframe, approval requirements). The updates we made on April 17, 2020, to our mortgage outlook and corresponding archetypal foreclosure frequency levels (see "Guidance: Methodology And Assumptions For Rating U.S. RMBS Issued 2009 And Later," published April 17, 2020) account for a portion of the borrowers entering COVID-19-related temporary forbearance plans and their impact to the overall credit quality of collateralized pools. To the extent a securitization pool exhibits growth levels in forbearance over time beyond those otherwise expected, additional adjustments may be applied.

To differentiate the credit quality of securitization pools with varying percentages of loans in active (or recently completed) forbearance or deferment due to the outbreak of the COVID-19 at the time of issuance, we increased loss coverage levels to account for the potential incremental risk. Given our current expectations for temporary forbearance or deferment plans and our market outlook, we view the credit quality of a mortgagor on a forbearance or deferment plan as weaker than one with a current loan but potentially stronger than one with a 30-day delinquent loan that exhibits payment issues in a normal macroeconomic environment. Our view considers the fact that forbearance or deferment may have been utilized by some borrowers who could have otherwise made the payment due, or the forbearance may be related to a temporary furlough or loss of income). The adjustment factors we apply to 30- and 60-day delinquent loans are 2.5x and 5.0x, respectively.

As of Oct. 18, 2020, we are aware of 424 mortgage loans (approximately 29.32% by pool balance) where the servicer granted the borrowers deferment of up to three months and/or forbearance of up to four months due to the outbreak of the COVID-19 virus in the U.S. Of these loans, 418 loans (29.11% by pool balance) were granted deferment up to three months, five loans (0.19%) were initially granted up to three months of deferment and subsequently up to four months of forbearance, and one loan (0.02%) was granted four months of forbearance.

Further, the borrowers for 407 of these 424 mortgage loans have completed their deferment plans and have either continued to make full monthly payments due after their deferment period ended or repaid the deferred amounts in full. For these 407 loans, we applied a forbearance-related adjustment factor of 1.25x-1.75x. For six loans , which are in an active forbearance, we applied a forbearance-related adjustment factor of 1.75x-2.50x. This resulted in an overall adjustment factor of 1.15x at the pool level. For the remaining 11 loans, which had previously received a deferral plan and are currently 30 days delinquent, we applied a 2.5x 30-day delinquency adjustment to the foreclosure frequency.

When deriving these factors, we considered aspects such as the seasoning of the loans and deferment or forbearance plans, payment patterns of those loans before and throughout the deferment or forbearance plan, the various stages of deferment or forbearance (see table 1), and our general expectations of additional deferment and forbearance from now until securitization closing.

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Table 1

Forbearance/deferment status	Loan count (no.)	% by balance
Never received forbearance or deferment	1184	70.68
Completed deferment plan--repaid deferred payments in full	34	2.34
Completed deferment plan and current on monthly payment	373	26.41
Completed deferment plan and currently delinquent	11	0.36
Active forbearance	6	0.21

We will continue to monitor the credit behavior related to temporary forbearance as the situation evolves and more performance information becomes available. We may adjust our loss coverage levels accordingly, which could affect the ratings. For instance, if we were to change the pool-level adjustment related to the portion of the pool that has received COVID-19-related forbearance relief and/or deferment to 1.30x (which is more akin to our adjustment factors for 30- to 60-day delinquent loans) from 1.15x, the preliminary ratings could, in some cases, be approximately one to two notches lower. We will also continue to monitor macroeconomic and housing conditions and update our mortgage market outlook and associated archetypal foreclosure frequencies, as applicable.

Monthly excess cash flow used to reduce losses

MFA 2020-NQM2, like other nonprime RMBS transactions, has a structure that pays monthly interest distributions from the interest remittances (and from principal remittances, to the extent not paid from interest remittances), and monthly principal distributions from the principal remittances, after which, monthly excess cash flow is used to cover current period realized losses and reimburse any previously applied realized loss amounts.

Citadel Servicing Corp. is not required to make principal and interest advances on any delinquent mortgage loan it services

In most nonprime RMBS transactions, the servicers are obligated to advance delinquent principal and interest (P&I) payments on any delinquent mortgage loan they service for 120 to 180 days or until the P&I advance is deemed unrecoverable; at which time, the respective servicer is no longer obligated to advance. By contrast, in this transaction, Citadel Servicing Corp. (Citadel; servicing 100.0% of the loans by pool balance) will not be required to make any P&I advances on the mortgage loans, and no other transaction participant will have the obligation to make any P&I advances for any mortgage loan. To account for the lack of advancing, we stressed liquidity to account for defaulted and delinquent loans in our cash flow analysis according to our criteria.

Citadel Servicing Corp. is not to make compensating interest payments

In RMBS transactions, servicers usually pay up to half of their servicing fee to compensate the trust investors for interest shortfalls arising out of prepayments. In this transaction, no such feature exists. This could potentially reduce the amount of cash that could otherwise be available to make payments to the bondholders. However, this did not affect our analysis because these non-credit-related potential interest shortfalls are outside the scope of our analysis.

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No master servicer

Citadel services 100% of the collateral, and there is no master servicer in the transaction. The servicing administrator, who is also the sponsor, has oversight over the servicer and is responsible for replacing the servicer, acceptable to the trustee, as necessary. The servicer cannot resign or be removed until a successor servicer has assumed the servicer's responsibilities and obligations under the pooling and servicing agreement (PSA). The servicing administrator cannot resign until a successor servicing administrator has been appointed by the depositor and has assumed the servicing administrator's rights, responsibilities, liabilities, and duties under the PSA.

One-month bank statement documentation loans

The MFA 2020-NQM2 transaction includes a population of 190 loans (20.1% by pool balance) analyzed as utilizing one month of bank statements for qualification purposes. While this is a higher concentration than seen in previously rated non-QM transactions, we note these loans have a weighted average seasoning of approximately 18 months, and all but 16 loans have a clean pay history since origination (with 10 loans being 1x30 and four loans having greater than 1x30 earlier but clean since then). The other two of the 16 loans have had a COVID-19 pandemic-related forbearance but are currently being reported as 30-days delinquent. Additionally, the 190 loans have a weighted average original combined loan-to-value (CLTV) ratio of 61.2% and a weighted average original FICO score of 743. We applied a 2.25x foreclosure frequency factor adjustment to these loans.

Foreign borrower concentration

In this transaction, there are 422 loans (20.0% by pool balance) where a borrower is identified as being either a non-permanent resident alien or foreign national. A majority of these loans (17.7% by pool balance) were underwritten to Citadel's "foreign national" program, which focuses on the property's valuation rather than the borrower's income or property cash flow. These loans have a weighted average used LTV of 62.5%. For the borrower residency status, we applied a 1.5x foreclosure frequency factor adjustment to these loans. In addition, for the loans underwritten to the foreign national program, we applied a 6.0x foreclosure frequency adjustment for the documentation type.

Owner-occupied business purpose loans

There are 16 owner-occupied business purpose loans (0.9% by pool balance, of which 15 loans were cash-out refinances and 1 loan was an equity buyout) in the pool that were qualified to the business purpose ability-to-repay (ATR) exempt program where the occupancy was a primary residence. The primary purpose of these loans is that more than one-half (50%) of the cash-out proceeds are used for the stated business purpose. Due diligence confirmed an exempt Truth in Lending Act (TILA) status for these loans. These loans have a weighted average current CLTV of 47.4%. All but five loans are seasoned two years, and all but three loans have clean paystrings. We applied a 6.00x foreclosure frequency factor adjustment to these loans.

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Collateral Summary

MFA 2020-NQM2's assets consist primarily of fixed- and adjustable-rate and interest-only (IO) non-QM and ATR exempt loans secured by first liens. The mortgage pool consists of 1,608 mortgage loans with a principal balance of approximately $570.2 million as of the cut-off date.

The collateral pool is weaker than the S&P Global Ratings' archetypal prime pool from a credit perspective, but it is generally in line with our expectations for a nonprime residential mortgage pool.

The pool's 'AAA' loss coverage requirement was determined to be 27.70%. In our analysis, we consider the following mortgage loan characteristics to be weaker:

- All loans are either non-QM loans or exempt loans;
- Lower FICO score borrowers;
- Loans to foreign borrowers (including foreign national and non-permanent resident alien borrowers);
- Alternative income documentation on loans;
- Business purposes loans with and without debt service coverage ratios (DSCR);
- Adjustable rate mortgage (ARM) and IO loans;
- Cash-out refinance loans;
- Condominiums, two- to four-family, and other property type loans; and
- Loans in forbearance or have had P&I payments deferred.

The mortgage loans consist primarily of 30-year fixed-rate (31.6% by pool balance) and five-, seven- and 10-year hybrid adjustable-rate fully amortizing mortgage loans (68.4% by pool balance), some with IO periods (10.5% by pool balance). The weighted average seasoning for the pool is approximately 20 months.

The weighted average updated FICO score for the collateral pool is 700, which includes certain S&P Global Ratings assumptions (see table 2 for a breakdown of the pool by the borrowers' FICO score). The pool include 422 loans to foreign borrowers (20.0% by pool balance), of which 373 loans are without a FICO score. We used a FICO score of 629--approximately the pool's average original FICO score minus one standard deviation--for these loans. We applied a 1.5x multiple to the foreclosure frequencies to all 422 loans to foreign borrowers (see chart 1).

Mortgage loans backed by properties that are primary residences make up approximately 61.2% of the pool balance. The mortgage loans are secured by first liens on single-family residences (51.9% by pool balance), planned-unit developments (PUDs; 31.9%), two- to four-family homes (4.9%), condominiums (9.7%), and other type properties (1.7%) (see table 3). Other property types include manufactured housing, mixed-use, five- to 10-unit multifamily, and condotels, for which we assumed 100% loss severity at all rating levels.

Table 2

Updated Credit Score Statistics

FICO score	Current balance (%)	No. of loans	Average current balance ($ 000s)
>=750	28.84	370	444.4

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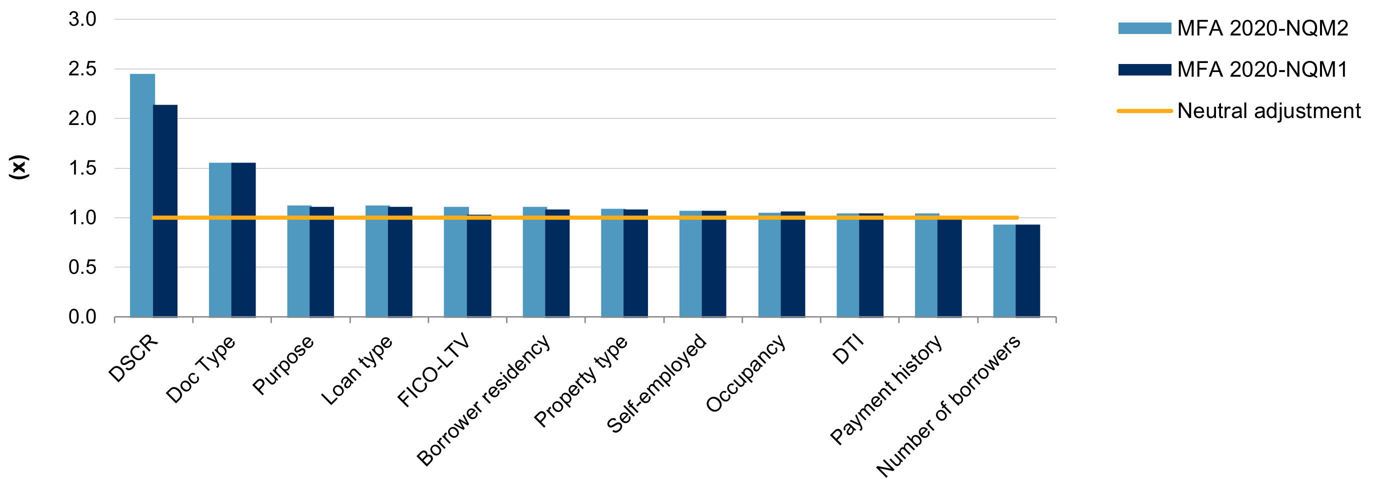
Table 2

Updated Credit Score Statistics (cont.)

FICO score	Current balance (%)	No. of loans	Average current balance ($ 000s)
725-749	9.49	148	365.7
700-724	14.40	202	406.5
675-699	11.06	162	389.3
650-674	6.66	112	339.0
625-649	21.56	452	272.0
600-624	2.40	53	258.6
575-599	2.22	39	325.2
550-574	1.21	26	264.3
<550	2.15	44	278.8
Total	100.00	1608	354.6

Chart 1

Foreclosure Frequency Adjustment Factor Breakout



DTI--Debt to income.

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Table 3

Collateral Characteristics

	MFA 2020-NQM2	MFA 2020-NQM1	BHLD 2020-1	Verus 2020-4	ARRW 2020-1	Archetypal pool(i)
Closing pool balance (mil. $)	570.2	391.0	188.5	429.5	355.7	N/A
Closing loan count (no.)	1,608	1,168	560	1084(x)	899	N/A
Avg. loan balance ($)	354,590	334,743	336,598	396,176	395,684	N/A

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Table 3

Collateral Characteristics (cont.)

	MFA 2020-NQM2	MFA 2020-NQM1	BHLD 2020-1	Verus 2020-4	ARRW 2020-1	Archetypal pool(i)
WA original CLTV (%)	64.9	66.2	65.6	68.6	66.9	75.0
WA current CLTV (%)	63.4	64.3	64.5	68.1	65.8	75.0
WA FICO(ii)	700 (ii)	711	724	708	742	725
WA current rate (%)	6.4	6.3	5.8	6.2	5.4	N/A
WA original term (mos.)	361	360	357	371	360	360
WA seasoning (mos.)	20	19	7	7	8	0-6
WA debt-to-income (%)	32.4	35.3	31.2	36.9	37.2	36
WA DSCR (non-zero)	1.11	1.30	1.09	1.28	1.18	N/A
Owner occupied (%)	61.2	64.2	57.0	48.3	68.1	100
Single-family (including unattached and attached PUD) (%)	83.7	84.4	69.1	78.2	81.2	100
Adjustable-rate loans (%)	68.4	68.4	85.4	59.1	72.9	0.0
Loans with IO payments (%)	10.5	8.4	5.7	20.6	3.1	0.0
Purchase (%)	47.3	52.5	69.8	48.3	71.2	100
Cash-out refinancing (%)	42.9	39.8	25.9	37.5	23.0	0.0
Full documentation (%)	13.6	18.5	41.0	24.7	58.1	100
Alternative/bank statement/P&L statement documentation (%)	53.9	53.7	36.4	31.1	38.2	0
Other/asset depletion/DSCR documentation (%)	32.5	27.8	22.6	44.2	3.8	0.0
Investor property (%)	28.8	30.0	36.8	48.7	27.1	
Self-employed borrowers (%)(iii)	78.2	73.8	46.5	51.6	39.5	0.0
Loans with co-borrowers (%)	30.6	31.7	12.7	24.5	10.9	0.0
Loans to borrowers with multiple mortgages (%)(iv)	4.0	3.8	0.0	6.8	1.0	N/A
Loans to foreign borrowers (%)(foreign national and non-permanent resident aliens)	20.0	14.6	21.0	12.7	5.1	0.0
Modified loans (%)(v)	0.0	0.0	0.0	3.9	0.0	0.0
PCEs (%)(v)	0.7	0.6	0.0	1.1	0.0	0.0
Current (%)	98.7(vi)	100(vi)	100(vi)	100(vi)	99.4(vi)	100
30+ day delinquent (%)	1.3	0.0	0.0	0.0	0.6	0.0
Length of P&I advancing (mos.)(vii)	0(viii)	0(viii)	6(viii)	3	6	Full
Pool-level adjustments (multiplicative factors)						
Geographic concentration	1.03	1.02	1.15	1.05	1.19	1.00
Mortgage operational assessment	1.05	1.05	1.02	1.00	1.03	1.00
Representations and warranties	1.10	1.10	1.10	1.10	1.10	1.00

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Table 3

Collateral Characteristics (cont.)

	MFA 2020-NQM2	MFA 2020-NQM1	BHLD 2020-1	Verus 2020-4	ARRW 2020-1	Archetypal pool(i)
Other (i.e. loan modification/PCE/due diligence)	1.01	1.01	1.00	1.03	1.00	1.00
Loans in forbearance/deferred payements related to the COVID-19 pandemic	1.15	1.10	1.15	1.15	1.15	
Combined pool-level adjustments(ix)	1.38	1.31	1.48	1.35	1.55	1.00
Loss estimation						
'AAA' loss coverage (%)	27.70	23.40	30.00	33.45	15.90	7.50
'AAA' foreclosure frequency (%)	60.68	51.87	56.68	67.29	32.54	15.00
'AAA' loss severity (%)	45.65	45.11	52.93	49.71	48.86	50.00
'BBB' loss coverage (%)	9.50	7.60	9.65	11.25	4.45	1.92
'BBB' foreclosure frequency (%)	38.00	30.98	32.37	40.04	17.11	6.41
'BBB' loss severity (%)	25.00	24.53	29.81	28.10	26.01	30.00
'B' loss coverage (%)	3.95	2.75	3.10	3.85	1.25	0.65
'B' foreclosure frequency (%)	21.77	16.26	15.02	20.06	7.17	3.25
'B' loss severity (%)	18.14	16.91	20.64	19.19	17.43	20.00

(i)As defined in our Feb. 22, 2018, criteria article. (ii)FICO reflects the most recent scores obtained. For MFA 2020-NQM2, we assumed 629 for foreign borrowers who are missing FICO scores. (iii)Where either borrower or co-borrower is self-employed. (iv)Limited to borrowers who have multiple mortgage loans or properties included in the securitized pool. (v)Limited to modified and PCE loans considered in our analysis. (vi) Loans in forbearance are treated as current and included in the above the model forbearance adjustment (vii) Months of P&I advancing on a delinquent mortgage loan to the extent such advances are deemed recoverable. (viii) Citadel Servicing Corp. will not be required to make any P&I advances on the mortgage loans it services. Citadel services 100% of the MFA 2020-NQM2 collateral and 18.1% of the BHLD 2020-1 collateral. (ix) Combined pool-level adjustments are the product of each pool-level adjustment listed above. (x) 1,084 loans secured by 1,091 properties. WA--Weighted average. CLTV--Combined loan-to-value ratio. DSCR--debt service coverage ratio. PUD--planned-unit development. IO--Interest-only. PCEs--Prior credit events. P&I--Principal and interest. N/A--Not applicable.

Transaction Structure

Chart 2 shows an overview of the transaction's structure.

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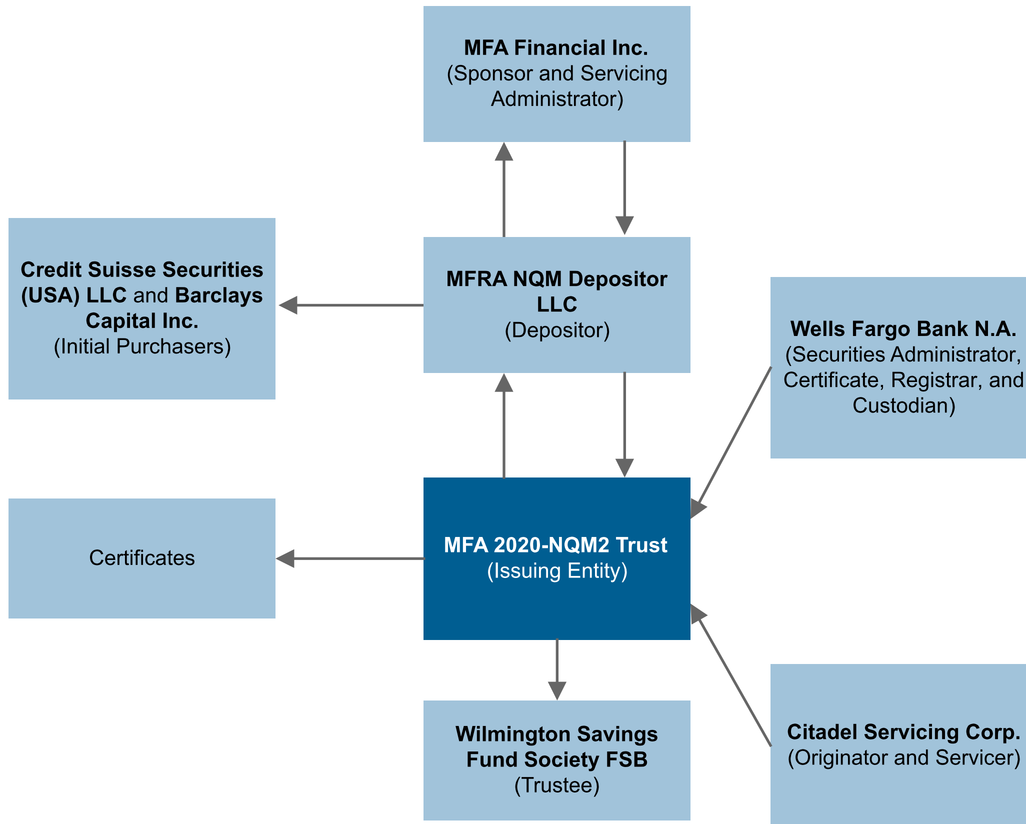
Chart 2

Transaction Structure



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The transaction is structured as a double true sale of the assets from the mortgage loan sponsor (MFA) to the depositor (MFRA NQM Depositor LLC), and from the depositor to the issuing trust (MFA 2020-NQM2). The issuing trust transfers the certificates to the depositor. The depositor sells the offered certificates to the initial purchasers, which will sell them to third-party investors. The depositor will sell the non-offered certificates, as well as the certificates required to be held to satisfy the risk retention rules, to the sponsor or a majority-owned affiliate, or retain such certificates for its own account.

In rating this transaction, S&P Global Ratings will review the legal matters it believes are relevant to its analysis, as outlined in its criteria.

Strengths And Weaknesses

We believe the following characteristics strengthen the MFA 2020-NQM2 transaction:

- The mortgage pool generally consists of loans to borrowers with significant home equity, as demonstrated by the pool's weighted average original CLTV ratio of 64.9%.

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- The third-party due diligence providers (Clayton Services LLC), which are on our list of reviewed providers) performed due diligence on 100% of the pool's loans. Their review encompassed regulatory compliance (as applicable), credit (underwriting) compliance, property valuations, and data quality.
- The senior class A-1, A-2, and A-3 certificates benefit from a credit support floor in which no principal is paid to the subordinate classes until the class A certificates are retired. Additionally, principal is paid sequentially among the senior classes in periods when the cumulative loss trigger or delinquency trigger has failed, further protecting the more senior classes.

We believe the following factors weaken the MFA 2020-NQM2 transaction:

- As of Oct. 18, 2020, 424 mortgage loans representing approximately 29.3% of the pool had borrowers that were granted forbearance or have had payments deferred due to the COVID-19 pandemic. We applied a 1.15x pool level adjustment to account for the risk associated with these loans.
- Income on certain mortgage loans (53.9% by pool balance) were verified using "alternative" methods (e.g., bank statements). Of this population of loans, 20.1% by pool balance were analyzed as one-month bank statement loans. We view income verification using "alternative" documentation to be weaker than "full" documentation, and, consequently, we increased our loss coverages for these loans by applying an adjustment to the foreclosure frequencies. We applied an adjustment factor generally ranging from 1.75x to 2.25x to the foreclosure frequencies depending on the length and type of income verification.
- The transaction includes 888 loans (47.3% by pool balance) that were made to borrowers with FICO scores below 700 (this includes 376 loans that did not have FICO scores and were assigned a score of 629). The mortgage pool's loss estimate was increased to account for the loans' higher default risk.
- The transaction includes 422 loans (20.0% by pool balance) that were made to non-permanent resident aliens or foreign national borrowers. We applied a 1.5x factor to the foreclosure frequencies for the loans. These loans include 373 loans (17.5% by pool balance) that do not have FICO scores. We assigned a FICO score of 629 to these loans.
- Four hundred seventy-nine investment property business purpose loans (24.1% by pool balance) primarily used LTV ratios to underwrite the loan (rather than DSCR). Stated reasonable income with verified assets is considered for these outside of Dodd-Frank business purpose programs. Furthermore, 378 of these loans (17.7% by pool balance) were underwritten to a foreign national program for second homes or investment. The mortgage pool also include 16 owner-occupied business purpose loans (0.9% by pool balance, of which 15 loans were cash-out refinances and one loan was an equity buyout) that were underwritten to stated business purposes and were confirmed by the due diligence firms to be ATR exempt. We applied a 6.00x adjustment to the foreclosure frequencies for the aforementioned 479 mortgage loans.
- One hundred forty-four property-focused investor loans were underwritten to an investment property business purpose program (7.4% by pool balance) using DSCR ranging from 0.54 to 3.82. Depending on the DSCR calculation, we applied an adjustment factor ranging from 3.15x to 6.00x to the foreclosure frequencies for these loans.
- Non-QM loans, which have an increased risk of ATR challenges and associated loan losses, comprise 62.2% of the pool. We applied an adjustment to loss severities per our criteria to account for this risk.

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- MFA, the sponsor, is providing the R&Ws for all of the loans in this transaction. We consider the R&W framework to be weak because the testing for any breaches (other than ATR notice loans that suffer a realized loss) is at the controlling holder's (the majority owner or owners if there is no single majority owner of class XS and, initially, the depositor) option. Third-party due diligence on 100% of the loans, along with the alignment of interest between certificateholders and MFA, which holds, indirectly through the depositor, the first-loss pieces (classes B-3 and B-2) and retains risk via a 5.00% horizontal slice of the capital structure, somewhat mitigates the weaknesses of the framework. Consequently, we applied an R&W factor of 1.10x, which increased our loss expectations for all rating categories by 10.00%.

Credit Analysis And Assumptions

Our analysis of the MFA 2020-NQM2 collateral pool considers a number of factors, including certain loan-level characteristics. The details of our analysis are described below.

Documentation type

The originator guidelines allow income verification using paystubs, W-2s, written verifications of employment (WVOEs), tax returns, bank statements, and CPA letters.

The originator also considers asset depletion as borrower income that can be used to qualify for monthly payments. In addition, the pool includes business-purpose investment property loans underwritten to either the properties' DSCR with consideration of the FICO scores and LTV ratios and/or underwritten to FICO scores and LTV ratios without consideration of a DSCR. There are 16 owner-occupied business-purpose loans that similarly were underwritten to FICO scores and LTV ratios (rather than debt to income [DTI]). Furthermore, certain loans in the pool underwritten to a foreign national ATR-exempt program for a second home or investment property were underwritten with the consideration of stated income/verified assets. Higher adjustments factors were applied to account for the risk of these alternative/other documentation types (relative to fully documented loans) on foreclosure frequency as described further below.

Table 4

Documentation Type (Income Verification Type/Length)

	Loan count (no.)	Current balance (%)	Alternative income verification length (WA no. of months)	Foreclosure frequency adjustment factors (x)	'AAA' foreclosure frequency without pool adjustment factors (%)
Full documentation					
Appendix Q/qualified mortgage					
Full (24+ months)	223	11.5	-	1.00	28.0
Full (24+ months) WVOE only	10	0.7	-	1.0	12.2
Full (12-23 months)	17	0.9	-	1.25	31.4
Full (12-23 months) WVOE only	-	-	-	-	-
Full (1-11 months)	7	0.4	-	1.50	41.8
Full (1-11 months) WVOE only	-	-	-	-	-

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Table 4

Documentation Type (Income Verification Type/Length) (cont.)

	Loan count (no.)	Current balance (%)	Alternative income verification length (WA no. of months)	Foreclosure frequency adjustment factors (x)	'AAA' foreclosure frequency without pool adjustment factors (%)
Alternative documentation(i)					
24+ months					
Business bank statements	129	7.8	24.1	1.75	52.57
Personal bank statements	76	4.6	24.2	1.75	44.62
Personal and business bank statements	-	-	-	-	-
P&L statements	1.0	0.1	60.0	1.75	34.2
12-23 months					
Business bank statements	173	12.7	12.1	2.00	-
Personal bank statements	139	8.6	12.1	2.00	32.27
Personal and business bank statements	-	-	-	-	-
P&L statements	-	-	-	-	-
1-11 months					
Business bank statements	16	1.9	1.5	2.25	25.13
Personal bank statements	174	18.2	1.3	2.25	28.65
Personal and business bank statements	-	-	-	-	-
P&L statements	-	-	-	-	-
Other Documentation					
Other (DSCR)	144	7.4	-	3.15-6.00	65.21
Other (applied 0.00 DSCR) OO Business Purpose	16	1.0	-	6.0	87.01
Other (applied 0.00 DSCR) NOO Business Purpose	85	5.5	-	6.0	83.25
Other (applied 0.00 DSCR) foreign national	378	17.7	-	6.0	99.61
Other (asset underwriting/depletion)	20	1.0	-	3.0	38.10

(i)The documentation source may include other secondary documentation types. WVOE--Written verification of employment. NOO--Non-owner occupied. OO--Owner occupied. WA--Weighted average. P&L--Profit and loss. DSCR--Debt service coverage ratio

For 257 loans, approximately 13.6% of the pool balance, traditional (full) documentation was used for fully verifying and calculating the borrowers' qualifying income (e.g., WVOE, pay stubs, W-2s, personal and business tax returns, and IRS transcripts). We applied a documentation type adjustment factor ranging from 1.00x to 1.50x, depending on the length of the income verification.

We classified all loans to borrowers that used income derived from bank statements (business or personal) or CPA letters as alternative documentation loans. Alternative documentation was used on 708 mortgage loans (53.9% by pool balance), with the number of months of statements ranging

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from one month to 24 months or more. Of the 708 loans, 190 (20.1% by pool balance) used less than 12 months of alternative documentation. We view income verification using alternate documentation to be a weaker standard than full documentation of income. As a result, we increased our loss coverages for these loans by an adjustment factor ranging from 1.75x to 2.25x.

Twenty loans in the pool (1.0% by pool balance) were underwritten to a lending program that considers accumulated assets (asset depletion) rather than a verified income stream. We classified these loans as "other" documentation loans and applied a 3.00x adjustment factor to the foreclosure frequencies for these loans.

One hundred forty-four loans in the pool (7.4% by pool balance) were underwritten to a lending program that considers investment property cash flow. We classified these loans as "other" documentation loans with a DSCR flag and applied a 3.15x-6.00x adjustment factor to the foreclosure frequencies based on the provided DSCR calculation. The DSCR calculations provided by the issuer for these loans ranged from 0.54 to 3.82.

We classified 85 investment property loans (5.5% by pool balance) that were primarily underwritten to FICO scores and LTV ratios (rather than DSCR) as "other" documentation type. We evaluated these non-DSCR loans as if they were DSCR loans with a DSCR of zero; our loss model applied a 6.00x adjustment factor to the foreclosure frequencies for these non-DSCR loans.

Similarly, sixteen owner-occupied ATR exempt business-purpose loans (1.0% by pool balance) were primarily underwritten to FICO scores and LTV ratios (rather than DTI). We classified these loans as "other" documentation loans and applied a 6.00x adjustment factor to the foreclosure frequencies for these loans.

Three hundred seventy-eight loans (17.7% by pool balance) were underwritten to a foreign national program that primarily used LTV ratios with consideration of stated income/verified assets. We evaluated those loans as "other" documentation type and applied a 6.00x adjustment in our loss model to the foreclosure frequencies to these loans (in addition to a 1.50x factor we applied to the foreclosure frequencies to account for these loans being made to foreign borrowers).

PCE classification and analysis

The borrowers on a portion of the mortgage loans have had one or more prior credit events (PCEs), such as bankruptcies or housing-related PCEs (foreclosures, short sales, deed-in-lieu of foreclosure, etc.) that may have limited their access to loan products offered by the various agencies. Although these borrowers' updated FICO scores likely reflect their PCEs, we made an incremental adjustment to the foreclosure frequencies to account for this unique pool characteristic. We believe that a borrower's behavior surrounding a PCE could indicate what they would do when faced with a similar situation in the future, and suggests a greater likelihood that they would default, notwithstanding this and other adverse performance already incorporated in the borrower's FICO score. Therefore, these borrowers may behave similarly to borrowers who are 30 days delinquent.

We focused primarily on prior bankruptcy, foreclosure, short sale, and deed-in-lieu events that occurred within 24 months (bankruptcy discharges or dismissals) or 36 months (all other non-bankruptcy housing-related events). For loans to borrowers with more seasoned PCEs, we believe the associated risks associated with those PCEs are reflected in the updated FICO. Fourteen loans (0.7% of the pool balance) fell into the PCE category, as defined in our criteria, to which we applied a 1.01x pool-level PCE related loss coverage adjustment factor.

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QM and ATR standards

The Consumer Financial Protection Bureau issued final regulations for mortgage loans with applications submitted on or after Jan. 10, 2014, specifying the standards for a QM. Based on the designation provided by the sponsor, about 62.2% (by pool balance) are categorized as non-QM/compliant, including nine cash-out investor property loans where cash-out proceeds were used for consumer purposes, thus subject to ATR. The remaining loans (37.8%) were exempt from the QM/ATR rule because they are secured by investment properties, extended to foreign national borrowers, or meet certain business purpose requirements (see table 5 for a QM breakout).

Under the ATR rule, as more fully described in our criteria (see Appendix I of "Methodology And Assumptions For Rating U.S. RMBS Issued 2009 And Later," published Feb. 22, 2018), the originator and any assignee are jointly and separately liable for certain damages that may be incurred from noncompliance with the rule. We applied our criteria for each loan subject to the rule, which increased our loss coverage estimates at each rating category. The data the issuer provided to S&P Global Ratings, including additional fields that validate the loan's QM designation, were reviewed by the due diligence firms under the third-party due diligence firms' scope to verify that documentation exists to support the QM designation.

Table 5

Qualified Mortgage Breakout

QM status	Pool balance ($)	% by pool balance	Loan count (no.)	% by loan count
QM/non-HPML	-	-	-	-
QM/HPML	-	-	-	-
Non-QM/compliant	354,614,405	62.2	850	52.9
Not covered/exempt	215,565,541	37.8	758	47.1

QM--Qualified mortgage. HPML--Higher-priced mortgage loan.

Servicer advancing obligations

Citadel, as servicer, is not obligated and will not advance delinquent P&I payments on any delinquent mortgage loan they service. In addition, no other transaction party is obligated to advance delinquent P&I payments on any delinquent mortgage loan.

Unlike P&I advances, the servicer must make advances of delinquent taxes and insurance (and other property preservation advances) until the related property is liquidated or the servicer deems the advance to be nonrecoverable. We adjusted the loss severities in our model to account for the lack of P&I advancing and stressed liquidity in our cash flow analysis as described further below.

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Borrowers with multiple loans

There are 37 borrowers (4.0% by pool balance) with multiple loans in the MFA 2020-NQM2 pool, with no borrowers having more than five loans each. Given the limited exposure, we made no additional adjustments to the loss coverage and the tail risk analysis for borrowers with multiple loans.

Structural Features

MFA 2020-NQM2, like other nonprime RMBS transactions, has a mix of pro rata and sequential structures. Principal is paid pro rata among the senior classes (subject to passing cumulative loss and delinquency trigger tests), and then sequentially to the subordinate classes. In the periods that the cumulative loss trigger or the delinquency trigger fails, principal is paid sequentially to senior class A-1, A-2, and A-3 certificates.

This transaction also uses monthly excess cash flow to cover current period realized losses and reimburse any applied realized loss amounts. Using excess cash flow to cover realized losses allows the class M-1, B-1, and B-2 certificates' initial credit enhancement, which is provided by subordination, to be lower than the respective rating-specific loss coverages.

The securities administrator will make monthly interest distributions from the interest remittances and principal from the principal remittances (see tables 6-8).

The interest remittance amount includes the interest collected from borrowers (including interest payments that accompany prepayments, interest portions of liquidation proceeds [net of expenses], subsequent recoveries, redemption prices, termination prices, and repurchase amounts) minus aggregate servicing fees, servicing administrator fees, securities administrator fees, trustee fees, custodial fees, the servicer advance reimbursements permitted under the PSA, reimbursable expenses incurred by the controlling holder, and extraordinary expenses, which are generally subject to a $300,000 annual cap.

Although the extraordinary expenses are passed through as reduced contractual interest due to the certificateholders, we ran these expenses at their capped amounts to stress the excess spread (as described further in the Interest Stresses section below). We also considered the extraordinary expenses when analyzing projected interest reduction amounts, as described further in the imputed promises section below.

Principal remittance amounts include the principal collected from borrowers (including prepayments, principal portions of liquidation proceeds [net of expenses], subsequent recoveries, redemption prices, termination prices, and repurchase amounts) minus fees, including extraordinary expenses that could not be paid from interest collections.

Table 6

Interest Payment Waterfall

Priority	Payment
1	Interest and interest carry-forward amounts(i) sequentially to the class A-1, A-2, A-3, M-1, B-1, B-2, and B-3 certificates.
2	Any remaining amounts paid as part of monthly excess cash flows.

(i)Interest carry-forward amounts are deferred interest payments that accrue interest at the lower of the respective fixed coupon and the net WAC rate. Our preliminary ratings address the full payment of all interest and interest carry-forward amounts at the note rate by the final maturity date. WAC--Weighted average coupon.

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Table 7

Principal Payment Waterfall

Priority	Payment
If the delinquency and the cumulative loss trigger tests pass	
1	Interest and interest carry-forward amounts sequentially to the class A-1, A-2, and A-3 certificates.
2	Principal pro rata to the class A-1, A-2, and A-3 certificates, until the class balances are reduced to zero.
3	Interest and interest carry-forward amounts to the class M-1 certificates.
4	Principal to the class M-1 certificates, until the class balance is reduced to zero.
5	Interest and interest carry-forward amounts to the class B-1 certificates.
6	Principal to the class B-1 certificates, until the class balance is reduced to zero.
7	Interest and interest carry-forward amounts to the class B-2 certificates.
8	Principal to the class B-2 certificates, until the class balance is reduced to zero.
9	Interest and interest carry-forward amounts to the class B-3 certificates.
10	Principal to the class B-3 certificates, until the class balance is reduced to zero.
11	Any remaining amounts paid as part of monthly excess cash flows.
If the delinquency or the cumulative loss trigger test fails	
1	Interest and interest carry-forward amounts to the class A-1 certificates.
2	Principal to the class A-1 certificates, until the class balance is reduced to zero.
3	Interest and interest carry-forward amounts to the class A-2 certificates.
4	Principal to the class A-2 certificates, until the class balance is reduced to zero.
5	Interest and interest carry-forward amounts to the class A-3 certificates.
6	Principal to the class A-3 certificates, until the class balance is reduced to zero.
7	Interest and interest carry-forward amounts to the class M-1 certificates.
8	Principal to the class M-1 certificates, until the class balance is reduced to zero.
9	Interest and interest carry-forward amounts to the class B-1 certificates.
10	Principal to the class B-1 certificates, until the class balance is reduced to zero.
11	Interest and interest carry-forward amounts to the class B-2 certificates.
12	Principal to the class B-2 certificates, until the class balance is reduced to zero.
13	Interest and interest carry-forward amounts to the class B-3 certificates.
14	Principal to the class B-3 certificates, until the class balance is reduced to zero.
15	Any remaining amounts paid as part of monthly excess cash flows.

Table 8

Monthly Excess Cash Flow Waterfall

Priority	Payment
1	Sequentially to classes A-1, A-2, A-3, M-1, B-1, B-2, and B-3 as principal, up to the amount of any realized losses in the current period until their respective certificate amount is reduced to zero.
2a	Sequentially to classes A-1, A-2, A-3, M-1, B-1, B-2, and B-3 as principal, up to the amount of any cumulative applied realized losses until their respective certificate amount is reduced to zero.

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Table 8

Monthly Excess Cash Flow Waterfall (cont.)

Priority	Payment
2b	Sequentially to classes A-1, A-2, A-3, M-1, B-1, B-2, and B-3 to reimburse for applied realized loss amounts previously allocated thereto.
3	To the cap carryover reserve account, up to the aggregate cap carryover amount for classes A-1, A-2, A-3, M-1,B-1 and B-2; and then, sequentially any unpaid cap carryover amounts(i) from amounts on deposit in the cap carryover reserve account to classes A-1, A-2, A-3, M-1, B-1 and B-2.
4	To the class XS certificates certain amounts.
5	To the transaction parties, pro rata, any fees, expenses, or indemnification amounts not previously paid due to application of the annual cap and any subcaps.
6	Any remaining amounts to the class R certificates.

(i)The cap carryover amount is the positive difference between the interest that would have accrued at the fixed coupon (without regard to the net WAC rate) and what was actually due based on the net WAC rate. Any prior unpaid cap carryover amounts also accrue at the fixed rate. Our preliminary ratings do not address the payment of cap carryover amounts. WAC--Weighted average coupon.

Interest on classes A-1, A-2, A-3, M-1, B-1, and B-2 is based on the lower of the coupon on the certificates and the net weighted average coupon (WAC) rate (defined as the mortgage interest rate net of fees and extraordinary expenses). Interest on class B-3 is equal to the net WAC rate.

Under the transaction documents, a failure to pay the interest amounts due on the securities will result in the interest being deferred. Deferred interest (interest carry-forward amounts) accrues at the lower of the fixed rate and the net WAC rate for classes A-1, A-2, A-3, M-1, B-1 and B-2, and at the net WAC rate for class B-3. Our preliminary ratings address ultimate P&I payments (including interest carry-forward amounts) by the certificates' final maturity date.

However, the preliminary ratings do not address the payment of cap carryover amounts (i.e., the difference between the coupon and the net WAC cap where the coupon exceeds the net WAC cap), which are subordinated in the payment priority. In our view, neither the certificates' initial coupons nor the initial net WAC rates are de minimis, and nonpayment of the cap carryover amounts are not considered an event of default under the transaction documents. Therefore, in line with our criteria for imputed promises, we do not consider whether these cap carryover amounts are paid in our cash flow analysis.

The subordinate certificates are paid principal sequentially after all senior certificates have been paid off. Unlike the credit enhancement seen in shifting-interest RMBS structures, which may be depleted due to scheduled and prepaid principal paid to the subordinate classes, the credit enhancement in MFA 2020-NQM2 does not deplete since no principal payments are made on the subordinate certificates while the senior classes are outstanding.

Although principal is paid pro rata among the senior classes from the start, and there is no defined credit enhancement floor that would switch the senior classes' payment priority to sequential, we believe the transaction is adequately enhanced for the assigned preliminary ratings. Our view considers any tail risk considerations (see the Large Loan And Tail Risk Considerations section). The transaction starts with 14.5% enhancement for the senior classes, which then grows as a percentage of the current balance as they get paid down. Additionally, the delinquency trigger and cumulative loss trigger (see tables 9A and 9B) protect the more senior classes in tail risk situations if defaults increase much later in the transaction's life (a back-ended default curve) by switching the principal payment priority among the senior classes to sequential.

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Table 9A

Delinquency Trigger Event

Distribution date occurring in the following periods	Six-month average of 60+ day delinq. plus loans modified in past 12 months (as a % of the current pool balance)(%)
November 2020 - October 2022	10.0
November 2022 - October 2023	15.0
November 2023 - October 2025	20.0
November 2025 and thereafter	25.0

Table 9B

Cumulative Loss Trigger Event

Distribution date occurring in the following periods	Applied realized loss amounts since closing date (as a % of the cut-off date pool balance) (%)
November 2020 - October 2023	2.0
November 2023 - October 2024	3.0
November 2024 - October 2025	4.0
November 2025 and thereafter	7.0

If the certificates' aggregate class balance exceeds the pool balance, the resulting excess (the applied realized loss amount) is applied in reverse-sequential order to the class B-3, B-2, B-1, M-1, A-3, A-2, and A-1 certificates until each class' principal balance has been reduced to zero.

Subsequent recoveries on the loans will be distributed sequentially to classes A-1, A-2, A-3, M-1, B-1, B-2, and B-3 to write-up any classes (that had earlier been written-down) up to the realized and applied realized loss amount allocated to that class.

Geographic Concentration

S&P Global Ratings analyzes the pool's geographic concentration risk based on the concentrations of loans in each of the core-based statistical areas (CBSAs) as defined by the U.S. Office of Management and Budget (see Appendix II of "Methodology And Assumptions For Rating U.S. RMBS Issued 2009 And Later," published Feb. 22, 2018). In this transaction, the top five CBSAs account for 40.75% of the aggregate pool (see table 10). Because of this concentration, we applied a Herfindahl-Hirschman Index pool-level adjustment factor (a concentration measure based on the sum of the squared CBSA concentrations related to a benchmark concentration) of roughly 1.03x.

Table 10

Geographic Concentration

CBSA code(i)	CBSA	State	% by balance
31084	Los Angeles-Long Beach-Glendale	California	16.18
36740	Orlando-Kissimmee-Sanford	Florida	8.65
11244	Anaheim-Santa Ana-Irvine	California	5.87
33124	Miami-Miami Beach-Kendall	Florida	5.24
40140	Riverside-San Bernardino-Ontario	California	4.80
Top 5	-	-	40.75

(i)The CBSA code refers to the metropolitan division code, if available. CBSA--Core-based statistical area (includes metropolitan statistical areas and metropolitan divisions where defined, as well as micropolitan statistical areas).

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Large Loans And Tail Risk Considerations

As the number of loans in the transaction decreases, the effect of a single loan's losses becomes greater. If conditional prepayment rates are slow and collateral pool losses are not realized until later in a transaction's life (back-loaded losses), pro rata pay mechanisms can leave the senior certificates exposed to event risk later in the transaction's life (for more information on tail risk in RMBS transactions, see "Older RMBS Transactions Face Increased Tail Risk As Their Pools Shrink," published Aug. 9, 2012). To mitigate this risk, the transaction documents for shifting interest structures typically provide for a credit enhancement floor, specifying principal payments not be made to subordinate classes if the credit support available to the senior classes falls below a threshold. This transaction does not explicitly define a credit enhancement floor. However, due to the sequential payment mechanism to the subordinate classes, which make up 14.5% of the capital structure, the preliminary 'AAA (sf)', 'AA+ (sf)', and 'A (sf)' rated classes effectively have a floor of 14.5% initially. Although subordination can be depleted due to realized losses over time, the effective floor to the more senior classes can increase when losses go over certain thresholds and trip the cumulative loss or delinquency triggers, making the payment priority fully sequential.

To analyze the appropriateness of this effective credit enhancement floor, we use an approach outlined in "Methodology And Assumptions For Rating U.S. RMBS Issued 2009 And Later," published Feb. 22, 2018. Per this approach, instead of focusing on the largest loans by balance at issuance, we risk-weighted the loans in the transaction by focusing on those loans with the largest expected loss exposures, assuming default.

After considering the enhancement provided in the transaction in conjunction with the cumulative loss and delinquency trigger definitions and the expected paydown on the classes, we believe the rated senior classes are sufficiently protected from tail risk as the transaction seasons.

Mortgage Operational Assessment Review

MFA Financial Inc.

The transaction pool is comprised of 100% of loans originated by Citadel. We conducted a transaction specific review of the aggregator, MFA, and we reviewed Citadel's performance data provided by MFA on its aggregate non-QM acquisitions.

We focused our review on the historical loan performance of the Citadel non-QM loans acquired by MFA and considered the due diligence results from S&P Global Ratings-reviewed third-party due diligence firms on 100% of the loans. In addition, we participated in a call with the MFA management to get an overview of the firm and an understanding of its non-QM acquisition processes.

MFA was formed in 1997 and began operations in 1998 as a REIT. MFA is a public (NYSE-MFA) company that is headquartered in New York and invests, among other assets, in residential whole loans by purchasing packages of newly originated non-QM, re-performing and nonperforming whole loans, as well as certain other mortgage products. MFA funds its purchases primarily through the use of repurchase agreements (repos).

MFA has purchased non-QM loan pools from various sellers to date (starting in the fourth quarter of 2017). Although MFA has a short history of purchasing non-QM loans, it has extensive experience purchasing, trading, and securitizing residential whole loans, agency and non-agency

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MBS, as well as reperforming and nonperforming residential mortgage loans.

MFA has 100% due diligence conducted on loans that it acquired from Citadel and included in the pool using a third-party review firm that is on S&P Global Ratings' reviewed list. The scope of the review, which is consistent with market standards, comprises a full review of these loans (credit, compliance [as applicable], and property valuation).

Our quantitative analysis was based on our review of loan performance information provided by MFA as of Sept. 30, 2020. The company has limited loan performance history on non-QM loans because it started aggregating non-QM loans in the fourth quarter of 2017. Although MFA has experienced housing and economic downturns over its life, its non-QM loans have not gone through a downturn.

We reviewed the origination volume and loan performance history, including delinquencies, early payment defaults (EPDs), losses, and repurchases for MFA. As expected, given the loans' limited seasoning, the company reported that the loans in its portfolio, prior to the COVID-19 pandemic, have experienced limited 60-plus-day or 90-plus-day delinquencies, or EPD and no losses. As of September 2020, MFA has put back 0.17% of non-QM loans to related originators for EPDs since it started acquiring non-QM loans in 2017.

We applied a transaction specific 1.05x to the loss coverage at all rating categories to reflect our view of MFA's residential mortgage acquisition platform and Citadel's origination platform.

Third-Party Due Diligence Review

Clayton performed third-party due diligence on 100% of the loans in the transaction. The scope of their review of the loans encompassed compliance (as applicable), credit, and valuation reviews.

Some loans fell within the scope of the TRID rule. For these loans, the third-party firms followed the Structured Finance Assn. (SFA) RMBS 3.0 TRID Compliance Review Scope in conducting their final loan reviews (see "Standard & Poor's Comfortable With SFIG Draft Proposal Regarding TRID Due Diligence," published April 25, 2016). According to our published third-party due diligence criteria, we adjust our loss expectations based on our view of the firms' findings (see Appendix III of "Methodology And Assumptions For Rating U.S. RMBS Issued 2009 And Later," published Feb. 22, 2018).

Some of the highlights of the findings include:

- Secondary valuations were received for all loans, and these were used to support valuations within the allowable negative 10.00% variance;
- All of the loans received a grade "A" or "B" for credit, valuation, and compliance (where applicable); and
- No additional adjustment was made to estimated loss coverage.

After reviewing the third-party due diligence results, we applied an adjustment of 1.00x to the loss coverage at all rating categories.

R&Ws

According to our criteria (see Appendix IV of "Methodology And Assumptions For Rating U.S. RMBS Issued 2009 And Later," published Feb. 22, 2018), S&P Global Ratings reviewed the R&Ws made by the sponsor in this transaction. We evaluated the strength of these R&Ws and considered whether

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any breach could have a materially adverse impact on the interests of the transaction's certificateholders. If the loan-level R&Ws in the transaction documents do not address all risks deemed relevant, we will determine whether we believe it is appropriate to assess additional credit enhancement. Lastly, we consider the R&W provider's ability to fulfill its obligations in the event of a breach.

The collateral pool consists of loans from one originator. The sponsor does not pledge the originators' R&Ws to the trust but rather makes R&Ws on the mortgage loans itself.

We consider the R&W framework to be weaker than those seen in recent prime jumbo transactions because the testing or curing of any breaches (other than any loans showing losses related to ATR) is not automatic but rather at the option of the controlling certificateholder (initially, the depositor who is an affiliate of the sponsor). However, 25.00% or more of the aggregate certificateholders will be able to initiate reviews at their expense, if the controlling certificateholder chooses not to review or if such certificateholders disagree with the findings of the controlling holder on any review. The controlling certificateholder's expense for the R&W review will be reimbursed from the trust's interest remittance amount.

The R&Ws are generally consistent with our published criteria and will remain in effect for the transaction's life. In addition, the sponsor is required to appropriately remedy any ensuing R&W breach if it has a materially adverse impact on the loan by either curing the breach, substituting the loan based on defined requirements, or purchasing the mortgage loan at the repurchase price. In addition, certain R&Ws include carve-out language that the representation or covenant does not apply to any mortgage loan subject to a COVID-19 pandemic-related forbearance plan.

Although the issuer will include an EPD covenant that is consistent with other rated non-QM transactions, all loans in this transaction are seasoned beyond the EPD timeframe.

The enforcement mechanism for R&W breaches includes provisions for a breach review, at the controlling holder's option, by an independent reviewer or by the controlling holder itself for any loan that experiences a realized loss. A review is mandatory only in the case of an ATR-related realized loss. TRID defects, as determined by a judicial proceeding, will be repurchased if damages and fees associated with such violation exceed $400 without any review or consideration of materiality. Dispute resolutions are ultimately subject to binding arbitration proceedings, if necessary, to determine if a breach occurred. If the controlling holder prevails in arbitration, then the arbitration expenses are reimbursed as part of extraordinary trust expenses. Otherwise, the expenses are not reimbursed by the trust.

Although the transaction-specific MOA's result reflects an adequate aggregation platform, in our opinion, a party with potentially limited repurchasing ability is providing the R&Ws. Therefore, we applied a 1.10x loss coverage adjustment to compensate for the risks associated with the financial capacities of this R&W provider, as well as weaknesses in the general construct of the R&W review framework as noted above. We believe this adjustment is appropriate in the context of the due diligence performed on the loans and the collateral's relative credit quality.

Cash Flow And Scenario Analysis

We reviewed the transaction structure and performed a cash flow analysis to simulate various rating stress scenarios to determine the preliminary ratings for each class consistent with our criteria, accounting for the available credit enhancement (see table 11). We analyzed a variety of scenarios for each rating category, including combinations of:

- Front- and back-loaded default timing curves;

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- Two-year recovery lag assumptions;
- Fast and slow prepayment assumptions;
- High, low, and forward interest rate curve assumptions; and
- Extraordinary trust expense stresses, and delinquency assumptions to stress liquidity for potential forbearance.

For further detail on our cash flow stresses, refer to our criteria "Methodology And Assumptions For Rating U.S. RMBS Issued 2009 And Later," published Feb. 22, 2018.

Table 11

Cash Flow Assumptions

		Scenario					
		AAA	AA+	A	BBB	BB	B
Recovery lag (mos.)		24	24	24	24	24	24
Prepayments (%)(i)							
Low CPR		1	2	3	4	5	6
High CPR		20	20	20	20	20	20
Scenario 1: Delinquency curve	20% of the loans assumed to default under the default timing curve in a given month and remain delinquent for three months that affect asset cash flows/liquidity in addition to our standard delinquency curve that tests triggers.						
Scenario 2: Delinquency curve	Delinquencies at 35% for first six months to stress liquidity and triggers followed by standard delinquency curve to test triggers.						
Foreclosure frequency (%)		60.68	57.76	46.29	38.00	29.75	21.77
Loss severity (%)		45.65	40.17	30.24	25.00	21.18	18.14
Loss coverage (%)		27.70	23.20	14.00	9.50	6.30	3.95

(i)Using a standard prepayment convention. CPR--Conditional prepayment rate. N/A-Not Applicable

Notwithstanding the use of excess interest within the transaction structure, we applied front- and back-loaded rather than bulleted (e.g. semiannual or annual lump sum) default timing curves in our analysis. This reflects our view of the potential volatility of cash flows given the loans are newly originated, subject to third-party due diligence, and include structural considerations such as pro rata principal allocations amongst the A1, A2, and A3 classes (see table 12).

We applied the foreclosure frequencies, loss severities, and combinations of the stresses noted above in our cash flow runs, and observed some periodic missed interest due to the liquidity stress associated with no advancing. To pass our rating category specific stresses, the interest carry-forward amounts resulting from any missed interest payments on the securities have to be paid in full by the maturity date. All carryforward interest was paid back with interest under the applicable rating-specific stresses in our cash flow projections. The results show that each rated class in the transaction is enhanced to a degree consistent with the assigned preliminary ratings.

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Table 12

Structural Assessment

Class	Rating	Initial class size (%)	Initial credit enhancement (%)	Loss coverage (%)	Percentage point difference between credit enhancement and loss coverage
A-1	AAA (sf)	71.10	28.90	27.70	1.20
A-2	AA+ (sf)	3.10	25.80	23.20	2.60
A-3	A (sf)	11.30	14.50	14.00	0.50
M-1	BBB (sf)	4.85	9.65	9.50	0.15
B-1	BB (sf)	3.50	6.15	6.30	(0.15)
B-2	B (sf)	2.65	3.50	3.95	(0.45)
B-3	NR	3.50	0.00	N/A	N/A

NR--Not rated. N/A--Not applicable.

Servicer stop advance stresses

The transaction documents do not provide for any P&I advance obligation; therefore, no P&I advances were being modeled in our cash flow projections. This assumption results in no projected monthly cash flows on defaulted loans that have not yet been liquidated (we assume a 24-month lag between default and liquidation). In addition, per our criteria, we assumed temporary delinquencies equal to 20.00% of the loans assumed to default (under our default timing curve in a given month) would remain delinquent for three months before curing. Our cash flow projections take into account these liquidity stresses and the transaction's ability to make monthly interest payments and, if necessary, interest carryforward amounts by the final maturity date on the preliminary rated classes. We also modeled a delinquency curve per our criteria for the purpose of testing the delinquency trigger.

To address the potential liquidity stress to cash flows due to loans entering forbearance in light of the current COVID-19 pandemic crisis, for which the P&I advancing party is not obligated to advance monthly P&I payments, we applied an additional delinquency stress scenario. We assumed 35.00% of the closing pool balance to be delinquent for the first six months with any P&I payments related to this delinquent portion coming back to the transaction after all defaults have been passed through to the transaction (approximately 144 months).

WAC deterioration stress

To address the potential for a pool's WAC to decline over time as higher coupon loans prepay or default, we stress the pool's projected cash flows by reducing the interest accrued on the assets. Where appropriate, we review the distribution of loan coupons in the pool, based on measures such as the standard deviation, interquartile range, and maximum/minimum ranges to assess the pool's homogeneity with respect to loan coupons.

Generally, the stress is based on the pool's WAC at the time of analysis versus 10 years later, based on an assumed reduction in pool balance of 10.00% per year applied to the loans with the highest coupons. This WAC difference is the maximum WAC deterioration assumed for the pool. The stress applied starts at zero in the transaction's first month and increases linearly each month to the maximum through year 10, at which point, it remains constant at the maximum

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through the deal's remaining life. This stress is applied in all cash flow stress scenarios at all rating levels. For this mortgage pool, we applied a maximum WAC deterioration of 0.87%.

Extraordinary expenses analysis

In this transaction, extraordinary trust expense payments reduce the net WAC rate, which effectively allocates the extraordinary trust expenses pro rata across all senior and subordinate certificateholders by reducing their interest payments by the amount of the extraordinary trust expenses paid (subject to the annual cap). Although the extraordinary expenses are passed through as reduced contractual interest due to certificateholders, we ran these expenses at their capped amounts to test any impact on the securities. We tested this because the securities depend on excess spread as a form of credit enhancement, the presence of certain structural features such as limited P&I advancing, and interest payments on the securities are deferrable.

Imputed Promises Analysis

Per our criteria, "Methodology And Assumptions For Rating U.S. RMBS Issued 2009 And Later," published Feb. 22, 2018, and related guidance "Methodology And Assumptions For Rating U.S. RMBS Issued 2009 And Later," published April 17, 2020, when rating U.S. RMBS transactions where credit-related events can reduce interest owed to the tranches across the capital structure rather than an allocation of the credit-related loss to the available credit support, we impute the interest owed to the certificateholders. WAC deterioration that occurs because of defaults, repurchases, or prepayments was not considered part of this analysis because it was already accounted for (e.g., through the application of our default timing stresses) or not considered a credit-related event (e.g., voluntary prepayment of principal).

Because this transaction provides for credit-related loan modifications and extraordinary trust expenses to reduce the net WAC, at which the transaction's bond coupons are capped, we applied the approach outlined in the criteria to assess the maximum potential rating (MPR) that could apply based on our projected interest reduction amount (PIRA). As this is a new issue transaction, there were no outstanding cumulative interest reduction amounts to be considered.

Consistent with our criteria, we assumed that 50.00% of the loans projected to default would be modified, which, when added to the extraordinary trust expenses, resulted in a maximum PIRA on the preliminary rated certificates that is below the 4.50% threshold. We stressed extraordinary trust expenses by the relevant extraordinary expense application factor over the four years from payment period 13 to 60. Based on the results of our analysis, there was no impact on the securities' MPR.

Operational Risk Assessment

Our criteria "Global Framework For Assessing Operational Risk In Structured Finance Transactions," published Oct. 9, 2014, presents our methodology and assumptions for assessing certain operational risks (severity, portability, and disruption risks) associated with asset types and key transaction parties (KTPs) that provide an essential service to a structured finance issuer. According to the criteria, we cap the ratings on a transaction if we believe operational risk could lead to credit instability and affect the ratings.

As provided in the operational risk criteria, for severity risk and portability risk, there are three possible rankings: high, moderate, or low. For disruption risk, there are four possible rankings:

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very high, high, moderate, or low. The rankings for each of the three risks determine the maximum potential rating that can be assigned to a structured finance security for a given KTP before giving consideration to any provisions for a backup KTP, such as a master servicer.

According to our criteria, we rank severity and portability risk for nonprime residential mortgage collateral as moderate and low, respectively. For this transaction, Citadel, as servicer, is the KTP. For our disruption risk assessment, we determined Citadel generally exhibits the characteristics that would characterize them as stable in regards to their operating condition. This part of the assessment considered Citadel's financial condition and net worth, their operating history, the firm's banking relationships, their business focus, adequacy of staffing, as well as senior and second-line management. For key performance attributes, we considered Citadel's track record, their experience in the servicing space, portfolio growth, transparency, and any regulatory or legal issues and determined Citadel met the attributes that would categorize them as satisfactory. Based on the disruption risk assessment matrix, an operating condition of stable combined with an assessment of key performance attributes of satisfactory, the disruption risk for this KTP would be low. Given these risk assessments, our criteria does not cap the ratings on the transaction.

Related Criteria

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- Credit Rating Model: LEVELS Model For U.S. Residential Mortgage Loans, Aug. 5, 2019
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