

**\$1,528,753,365**  
**Government National Mortgage Association**

**GINNIE MAE®**

**Guaranteed REMIC Pass-Through Securities  
and MX Securities  
Ginnie Mae REMIC Trust 2019-020**

**The Securities**

The Trust will issue the Classes of Securities listed on the front cover of this offering circular supplement.

**The Ginnie Mae Guaranty**

Ginnie Mae will guarantee the timely payment of principal and interest on the securities. The Ginnie Mae Guaranty is backed by the full faith and credit of the United States of America.

**The Trust and its Assets**

The Trust will own (1) Ginnie Mae Certificates and (2) certain previously issued certificates.

**The securities may not be suitable investments for you. You should consider carefully the risks of investing in them.**

**See “Risk Factors” beginning on page S-11 which highlights some of these risks.**

The Sponsor and the Co-Sponsor will offer the securities from time to time in negotiated transactions at varying prices. We expect the closing date to be February 28, 2019.

You should read the Base Offering Circular as well as this Supplement.

The securities are exempt from registration under the Securities Act of 1933 and are “exempt securities” under the Securities Exchange Act of 1934.

Class of REMIC Securities	Original Principal Balance(2)	Interest Rate	Principal Type(3)	Interest Type(3)	CUSIP Number	Final Distribution Date(4)
<b>Security Group 1</b>						
A	\$ 73,237,489	3.25%	SEQ/AD	FIX	38381RAA7	August 2047
IO(1)	31,426,543	5.50	NTL(PT)	FIX/IO	38381RAB5	February 2049
Z(1)	3,582,951	3.25	SEQ	FIX/Z	38381RAC3	February 2049
<b>Security Group 2</b>						
JK	140,329,796	3.50	PT	FIX	38381RAD1	February 2049
JS	70,164,898	(5)	NTL(PT)	INV/IO	38381RAE9	February 2049
KF(1)	70,164,898	(5)	PT	FLT	38381RAF6	February 2049
KI(1)	70,164,898	(5)	NTL(PT)	FLT/IO	38381RAG4	February 2049
<b>Security Group 3</b>						
D	55,071,000	3.25	SEQ/AD	FIX	38381RAH2	October 2047
ID(1)	23,498,212	5.50	NTL(PT)	FIX/IO	38381RAJ8	February 2049
ZD(1)	2,369,076	3.25	SEQ	FIX/Z	38381RAK5	February 2049
<b>Security Group 4</b>						
B	74,965,000	3.25	SEQ/AD	FIX	38381RAL3	October 2046
BZ	5,209,412	3.25	SEQ	FIX/Z	38381RAM1	February 2049
IB(1)	22,270,670	4.50	NTL(PT)	FIX/IO	38381RAN9	February 2049
<b>Security Group 5</b>						
C	35,503,000	3.25	SEQ/AD	FIX	38381RAP4	March 2047
IC	13,165,001	5.00	NTL(PT)	FIX/IO	38381RAQ2	February 2049
ZC	2,111,290	3.25	SEQ	FIX/Z	38381RAR0	February 2049
<b>Security Group 6</b>						
E	12,832,000	3.25	SC/SEQ/AD	FIX	38381RAS8	August 2048
IE	1,917,750	5.50	NTL(SC/PT)	FIX/IO	38381RAJ6	February 2049
ZE	64,479	3.25	SC/SEQ	FIX/Z	38381RAU3	February 2049
<b>Security Group 7</b>						
EF	450,000,000	(5)	PT	FLT	38381RAV1	February 2049
ES	51,510,883	(5)	NTL(PT)	INV/IO	38381RAW9	February 2049
NS	105,945,131	(5)	NTL(PT)	INV/IO	38381RAX7	February 2049
SE	154,101,076	(5)	NTL(PT)	INV/IO	38381RAY5	February 2049
SF	138,442,910	(5)	NTL(PT)	INV/IO	38381RAZ2	February 2049
<b>Security Group 8</b>						
FA(1)	116,967,713	(5)	PT	FLT	38381RBA6	February 2049
G	56,519,000	3.00	SEQ	FIX	38381RBB4	July 2043
SB	44,782,130	(5)	NTL(PT)	INV/IO	38381RBC2	February 2049
SC	50,169,530	(5)	NTL(PT)	INV/IO	38381RBD0	February 2049
SD	22,016,053	(5)	NTL(PT)	INV/IO	38381RBE8	February 2049
VA(1)	8,977,301	3.00	SEQ/AD	FIX	38381RBF5	June 2030
VZ(1)	22,229,485	3.00	SEQ	FIX/Z	38381RBG3	February 2049
<b>Security Group 9</b>						
M	10,000,000	3.50	SEQ/AD	FIX	38381RBH1	July 2047
ZM	395,850	3.50	SEQ	FIX/Z	38381RBJ7	February 2049
<b>Security Group 10</b>						
AB	991,702	3.25	PT	FIX	38381RBK4	February 2049
FC	3,318,987	(5)	PT	FLT	38381RBL2	February 2049
SA	1,478,334	(5)	NTL(PT)	INV/IO	38381RBM0	February 2049
SG	1,840,653	(5)	NTL(PT)	INV/IO	38381RBN8	February 2049
<b>Security Group 11</b>						
IJ(1)	14,101,733	4.50	NTL(SC/PT)	FIX/IO	38381RBP3	January 2049
<b>Security Group 12</b>						
IK(1)	8,467,728	5.50	NTL(SC/PT)	FIX/IO	38381RBQ1	July 2046

(Cover continued on next page)

Class of REMIC Securities	Original Principal Balance(2)	Interest Rate	Principal Type(3)	Interest Type(3)	CUSIP Number	Final Distribution Date(4)
<b>Security Group 13</b>						
AN(1) .....	\$ 21,688,000	3.00%	SEQ	FIX	38381RBR9	November 2045
CZ .....	26,580,159	4.25	SUP	FIX/Z	38381RBS7	February 2049
FH(1) .....	106,281,643	(5)	PT	FLT	38381RBT5	February 2049
FN(1) .....	37,181,717	(5)	PT	FLT	38381RBU2	February 2049
PF(1) .....	66,422,545	(5)	PAC/AD	FLT	38381RBV0	February 2049
PH(1) .....	94,050,000	3.00	PAC/AD	FIX	38381RBW8	June 2046
PS .....	66,422,545	(5)	NTL(PAC/AD)	INV/IO	38381RBX6	February 2049
SH .....	106,281,643	(5)	NTL(PT)	INV/IO	38381RBY4	February 2049
SN .....	37,181,717	(5)	NTL(PT)	INV/IO	38381RBZ1	February 2049
VH(1) .....	7,339,000	3.00	PAC/AD	FIX	38381RCA5	June 2030
VN(1) .....	1,783,000	3.00	SEQ/AD	FIX	38381RCB3	June 2030
ZH(1) .....	18,171,583	3.00	PAC/AD	FIX/Z	38381RCC1	February 2049
ZN(1) .....	4,415,289	3.00	SEQ	FIX/Z	38381RCD9	February 2049
<b>Residual</b>						
RR .....	0	0.00	NPR	NPR	38381RCE7	February 2049

- (1) These Securities may be exchanged for MX Securities described in Schedule I to this Supplement.
- (2) Subject to increase as described under "Increase in Size" in this Supplement. The amount shown for each Notional Class (indicated by "NTL" under Principal Type) is its original Class Notional Balance and does not represent principal that will be paid.
- (3) As defined under "Class Types" in Appendix I to the Base Offering Circular. The Class Notional Balance of each Notional Class will be reduced as shown under "Terms Sheet — Notional Classes" in this Supplement.
- (4) See "Yield, Maturity and Prepayment Considerations — Final Distribution Date" in this Supplement.
- (5) See "Terms Sheet — Interest Rates" in this Supplement.

## AVAILABLE INFORMATION

You should purchase the securities only if you have read and understood the following documents:

- this Offering Circular Supplement (this “Supplement”),
- the Base Offering Circular and
- in the case of the Group 6, 11 and 12 securities, each disclosure document relating to the Underlying Certificates (the “Underlying Certificate Disclosure Documents”).

The Base Offering Circular and the Underlying Certificate Disclosure Documents are available on Ginnie Mae’s website located at <http://www.ginniemae.gov>.

If you do not have access to the internet, call BNY Mellon, which will act as information agent for the Trust, at (800) 234-GNMA, to order copies of the Base Offering Circular. In addition, you can obtain copies of any other document listed above by contacting BNY Mellon at the telephone number listed above.

Please consult the standard abbreviations of Class Types included in the Base Offering Circular as Appendix I and the glossary included in the Base Offering Circular as Appendix II for definitions of capitalized terms.

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## TABLE OF CONTENTS

	<u>Page</u>		<u>Page</u>
Terms Sheet .....	S-3	ERISA Matters .....	S-46
Risk Factors .....	S-11	Legal Investment Considerations .....	S-46
The Trust Assets .....	S-14	Plan of Distribution .....	S-47
Ginnie Mae Guaranty .....	S-16	Increase in Size .....	S-47
Description of the Securities .....	S-16	Legal Matters .....	S-47
Yield, Maturity and Prepayment		Schedule I: Available Combinations .....	S-I-1
Considerations .....	S-20	Schedule II: Scheduled Principal	
Certain United States Federal Income		Balances .....	S-II-1
Tax Consequences .....	S-43	Exhibit A: Underlying Certificates .....	A-1

## TERMS SHEET

This terms sheet contains selected information for quick reference only. You should read this Supplement, particularly “Risk Factors,” and each of the other documents listed under “Available Information.”

**Sponsor:** J.P. Morgan Securities LLC

**Co-Sponsor:** Mischler Financial Group, Inc.

**Trustee:** U.S. Bank National Association

**Tax Administrator:** The Trustee

**Closing Date:** February 28, 2019

**Distribution Date:** The 20th day of each month or, if the 20th day is not a Business Day, the first Business Day thereafter, commencing in March 2019.

**Trust Assets:**

<u>Trust Asset Group or Subgroup<sup>(2)</sup></u>	<u>Trust Asset Type</u>	<u>Certificate Rate</u>	<u>Original Term To Maturity (in years)</u>
1	Ginnie Mae II	5.50%	30
2	Ginnie Mae II	4.50%	30
3	Ginnie Mae II	5.50%	30
4	Ginnie Mae II	4.50%	30
5	Ginnie Mae II	5.00%	30
6A	Ginnie Mae I	5.50%	30
6B	Ginnie Mae II	5.50%	30
6C	Underlying Certificate	(1)	(1)
7A	Ginnie Mae II	4.50%	30
7B	Ginnie Mae II	4.50%	30
7C	Ginnie Mae II	4.50%	30
7D	Ginnie Mae II	4.50%	30
8A	Ginnie Mae II	5.00%	30
8B	Ginnie Mae II	5.00%	30
8C	Ginnie Mae II	5.00%	30
9	Ginnie Mae II	3.50%	30
10A	Ginnie Mae II	5.50%	30
10B	Ginnie Mae II	6.00%	30
11	Underlying Certificate	(1)	(1)
12	Underlying Certificate	(1)	(1)
13A	Ginnie Mae II	5.00%	30
13B	Ginnie Mae II	5.00%	30

<sup>(1)</sup> Certain information regarding the Underlying Certificates is set forth in Exhibit A to this Supplement.

- <sup>(2)</sup> The Group 6, 7, 8, 10 and 13 Trust Assets consist of subgroups, Subgroup 6A, Subgroup 6B, Subgroup 6C, Subgroup 7A, Subgroup 7B, Subgroup 7C, Subgroup 7D, Subgroup 8A, Subgroup 8B, Subgroup 8C, Subgroup 10A, Subgroup 10B, Subgroup 13A and Subgroup 13B, respectively (each, a “Subgroup”).

**Security Groups:** This series of Securities consists of multiple Security Groups (each, a “Group”), as shown on the front cover of this Supplement and on Schedule I to this Supplement. Except in the case of certain MX Classes in Groups 1, 3, 4, 8, 11, 12 and 13, payments on each Group will be based solely on payments on the Trust Asset Group with the same numerical designation.

**Assumed Characteristics of the Mortgage Loans Underlying the Group 1, 2, 3, 4, 5, 7, 8, 9, 10 and 13 and Subgroup 6A and 6B Trust Assets<sup>(1)</sup>:**

<u>Principal Balance</u>	<u>Weighted Average Remaining Term to Maturity (in months)</u>	<u>Weighted Average Loan Age (in months)</u>	<u>Weighted Average Mortgage Rate<sup>(2)</sup></u>
<b>Group 1 Trust Assets</b>			
\$76,820,440	216	136	5.952%
<b>Group 2 Trust Assets</b>			
\$210,494,694	351	6	4.932%
<b>Group 3 Trust Assets</b>			
\$57,440,076	222	130	5.951%
<b>Group 4 Trust Assets</b>			
\$80,174,412	248	103	4.890%
<b>Group 5 Trust Assets</b>			
\$37,614,290	250	103	5.464%
<b>Subgroup 6A Trust Assets</b>			
\$3,212,903	186	161	6.000%
<b>Subgroup 6B Trust Assets</b>			
\$448,851	208	143	5.989%
<b>Subgroup 7A Trust Assets</b>			
\$51,510,883	358	2	5.011%
<b>Subgroup 7B Trust Assets</b>			
\$105,945,131	354	5	4.928%
<b>Subgroup 7C Trust Assets</b>			
\$154,101,076	357	1	4.968%
<b>Subgroup 7D Trust Assets</b>			
\$138,442,910	358	1	4.952%
<b>Subgroup 8A Trust Assets</b>			
\$78,368,728	357	1	5.472%
<b>Subgroup 8B Trust Assets</b>			
\$87,796,678	358	1	5.446%
<b>Subgroup 8C Trust Assets</b>			
\$38,528,093	358	2	5.382%
<b>Group 9 Trust Assets</b>			
\$10,395,850	319	37	3.938%
<b>Subgroup 10A Trust Assets</b>			
\$2,135,371	182	166	5.990%
<b>Subgroup 10B Trust Assets</b>			
\$2,175,318	164	181	6.558%
<b>Subgroup 13A Trust Assets</b>			
\$65,068,006	358	1	5.434%
<b>Subgroup 13B Trust Assets</b>			
\$154,139,804	358	1	5.460%
139,164,432	357	2	5.466%
25,540,694	353	5	5.490%
<u>\$318,844,930</u>			

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<sup>(1)</sup> As of February 1, 2019.

<sup>(2)</sup> The Mortgage Loans underlying the Group 1, 2, 3, 4, 5, 7, 8, 9, 10 and 13 and Subgroup 6B Trust Assets may bear interest at rates ranging from 0.25% to 1.50% per annum above the related Certificate Rate.

The actual remaining terms to maturity, loan ages and, in the case of the Group 1, 2, 3, 4, 5, 7, 8, 9, 10 and 13 and Subgroup 6B Trust Assets, Mortgage Rates of many of the Mortgage Loans underlying the Group 1, 2, 3, 4, 5, 7, 8, 9, 10 and 13 and Subgroup 6A and 6B Trust Assets will differ from the weighted averages shown above, perhaps significantly. See *“The Trust Assets — The Mortgage Loans” in this Supplement.*

**Characteristics of the Mortgage Loans Underlying the Group 11 and 12 and Subgroup 6C Trust Assets:** See Exhibit A to this Supplement for certain information regarding the characteristics of the Mortgage Loans included in the related Underlying Trusts.

**Issuance of Securities:** The Securities, other than the Residual Securities, will initially be issued in book-entry form through the book-entry system of the U.S. Federal Reserve Banks (the “Fedwire Book-Entry System”). The Residual Securities will be issued in fully registered, certificated form. See *“Description of the Securities — Form of Securities” in this Supplement.*

**Modification and Exchange:** If you own exchangeable Securities you will be able, upon notice and payment of an exchange fee, to exchange them for a proportionate interest in the related Securities shown on Schedule I to this Supplement. See *“Description of the Securities — Modification and Exchange” in this Supplement.*

**Increased Minimum Denomination Classes:** Each Class that constitutes an Interest Only Class. See *“Description of the Securities — Form of Securities” in this Supplement.*

**Interest Rates:** The Interest Rates for the Fixed Rate Classes are shown on the front cover of this Supplement or on Schedule I to this Supplement.

The Floating Rate and Inverse Floating Rate Classes will bear interest at per annum rates based on one-month LIBOR (hereinafter referred to as “LIBOR”) as follows:

<u>Class</u>	<u>Interest Rate Formula(1)</u>	<u>Initial Interest Rate(2)</u>	<u>Minimum Rate</u>	<u>Maximum Rate</u>	<u>Delay (in days)</u>	<u>LIBOR for Minimum Interest Rate</u>
EF .....	LIBOR + 0.71%	3.22263%	0.71%	4.50%	0	0.00%
ES .....	3.79% – LIBOR	1.27737%	0.00%	3.79%	0	3.79%
FA .....	LIBOR + 0.40%	2.89800%	0.40%	6.50%	0	0.00%
FC .....	LIBOR + 0.40%	2.90900%	0.40%	6.50%	0	0.00%
FE .....	LIBOR + 0.40%	2.89800%	0.40%	6.50%	0	0.00%
FG .....	LIBOR + 0.40%	2.89800%	0.40%	6.50%	0	0.00%
FH .....	LIBOR + 0.40%	2.89800%	0.40%	6.50%	0	0.00%
FN .....	LIBOR + 0.40%	2.89800%	0.40%	6.50%	0	0.00%
JF .....	LIBOR + 0.50%	3.01260%	0.50%	6.50%	0	0.00%
JS .....	6.00% – LIBOR	3.48740%	0.00%	6.00%	0	6.00%
KF .....	LIBOR + 0.50%	3.01260%	0.50%	6.00%	0	0.00%
KI .....	LIBOR – 5.50%	0.00000%	0.00%	0.50%	0	5.50%
NS .....	3.79% – LIBOR	1.27737%	0.00%	3.79%	0	3.79%
PF .....	LIBOR + 0.40%	2.89800%	0.40%	6.50%	0	0.00%
PS .....	6.10% – LIBOR	3.60200%	0.00%	6.10%	0	6.10%
SA .....	6.10% – LIBOR	3.59100%	0.00%	6.10%	0	6.10%
SB .....	6.10% – LIBOR	3.60200%	0.00%	6.10%	0	6.10%
SC .....	6.10% – LIBOR	3.60200%	0.00%	6.10%	0	6.10%
SD .....	6.10% – LIBOR	3.60200%	0.00%	6.10%	0	6.10%
SE .....	3.79% – LIBOR	1.27737%	0.00%	3.79%	0	3.79%
SF .....	3.79% – LIBOR	1.27737%	0.00%	3.79%	0	3.79%
SG .....	6.10% – LIBOR	3.59100%	0.00%	6.10%	0	6.10%
SH .....	6.10% – LIBOR	3.60200%	0.00%	6.10%	0	6.10%
SN .....	6.10% – LIBOR	3.60200%	0.00%	6.10%	0	6.10%

- (1) LIBOR will be established on the basis of the ICE LIBOR method, as described under “Description of the Securities — Interest Distributions — Floating Rate and Inverse Floating Rate Classes” in this Supplement.
- (2) The initial Interest Rate will be in effect during the first Accrual Period; the Interest Rate will adjust monthly thereafter.

**Allocation of Principal:** On each Distribution Date for a Security Group, the following distributions will be made to the related Securities:

**SECURITY GROUP 1**

The Group 1 Principal Distribution Amount and the Z Accrual Amount will be allocated, sequentially, to A and Z, in that order, until retired

**SECURITY GROUP 2**

The Group 2 Principal Distribution Amount will be allocated, concurrently, to JK and KF, pro rata, until retired

**SECURITY GROUP 3**

The Group 3 Principal Distribution Amount and the ZD Accrual Amount will be allocated, sequentially, to D and ZD, in that order, until retired



#### **SECURITY GROUP 4**

The Group 4 Principal Distribution Amount and the BZ Accrual Amount will be allocated, sequentially, to B and BZ, in that order, until retired

#### **SECURITY GROUP 5**

The Group 5 Principal Distribution Amount and the ZC Accrual Amount will be allocated, sequentially, to C and ZC, in that order, until retired

#### **SECURITY GROUP 6**

The Group 6 Principal Distribution Amount and the ZE Accrual Amount will be allocated, sequentially, to E and ZE, in that order, until retired

#### **SECURITY GROUP 7**

The Group 7 Principal Distribution Amount will be allocated to EF, until retired

#### **SECURITY GROUP 8**

The Subgroup 8A Principal Distribution Amount, the Subgroup 8B Principal Distribution Amount, the Subgroup 8C Principal Distribution Amount and the VZ Accrual Amount will be allocated as follows:

- The VZ Accrual Amount, sequentially, to VA and VZ, in that order, until retired
- 57.1428567783% of the Subgroup 8A Principal Distribution Amount, 57.1428568175% of the Subgroup 8B Principal Distribution Amount and 57.1428567721% of the Subgroup 8C Principal Distribution Amount to FA, until retired
- The remainder of the Subgroup 8A Principal Distribution Amount, the remainder of the Subgroup 8B Principal Distribution Amount and the remainder of the Subgroup 8C Principal Distribution Amount, sequentially, to G, VA and VZ, in that order, until retired

#### **SECURITY GROUP 9**

The Group 9 Principal Distribution Amount and the ZM Accrual Amount will be allocated, sequentially, to M and ZM, in that order, until retired

#### **SECURITY GROUP 10**

The Subgroup 10A Principal Distribution Amount and the Subgroup 10B Principal Distribution Amount will be allocated as follows:

- 30.7692199622% of the Subgroup 10A Principal Distribution Amount and 15.3846472102% of the Subgroup 10B Principal Distribution Amount to AB, until retired
- The remainder of the Subgroup 10A Principal Distribution Amount and the remainder of the Subgroup 10B Principal Distribution Amount to FC, until retired

#### **SECURITY GROUP 13**

The Subgroup 13A Principal Distribution Amount, the Subgroup 13B Principal Distribution Amount, the CZ Accrual Amount, the ZH Accrual Amount and the ZN Accrual Amount will be allocated as follows:

- The ZN Accrual Amount, sequentially, to VN and ZN, in that order, until retired

- The ZH Accrual Amount, sequentially, to VH and ZH, in that order, until retired
- The CZ Accrual Amount in the following order of priority:
  1. To PF, PH, VH and ZH, until reduced to their Aggregate Scheduled Principal Balance for that Distribution Date, concurrently, as follows:
    - a. 35.7142853302% to PF, until retired
    - b. 64.2857146698%, sequentially, to PH, VH and ZH, in that order, until retired
  2. To CZ, until retired
- The Subgroup 13A Principal Distribution Amount, concurrently, as follows:
  1. 57.1428560451% to FN, until retired
  2. 42.8571439549%, sequentially, to AN, VN and ZN, in that order, until retired
- The Subgroup 13B Principal Distribution Amount, concurrently, as follows:
  1. 33.3333332288% to FH, until retired
  2. 66.6666667712% in the following order of priority:
    - a. To PF, PH, VH and ZH, until reduced to their Aggregate Scheduled Principal Balance for that Distribution Date, concurrently, as follows:
      - i. 35.7142853302% to PF, until retired
      - ii. 64.2857146698%, sequentially, to PH, VH and ZH, in that order, until retired
    - b. To CZ, until retired
    - c. To PF, PH, VH and ZH, in the same manner and priority as step 2.a., but without regard to their Aggregate Scheduled Principal Balance, until retired

**Scheduled Principal Balances:** The Aggregate Scheduled Principal Balances for the Classes listed below are included in Schedule II to this Supplement. They were calculated using among other things the following Structuring Range:

	<b>Structuring Range</b>
<b>PAC Classes</b>	
PF, PH, VH and ZH .....	225% PSA through 349% PSA

**Accrual Classes:** Interest will accrue on each Accrual Class identified on the front cover of this Supplement at the per annum rate set forth on that page. However, no interest will be distributed to the Accrual Classes as interest. Interest so accrued on each Accrual Class on each Distribution Date will constitute an Accrual Amount, which will be added to the Class Principal Balance of that Class on each Distribution Date and will be distributable as principal as set forth in this Terms Sheet under “Allocation of Principal.”

**Notional Classes:** The Notional Classes will not receive distributions of principal but have Class Notional Balances for convenience in describing their entitlements to interest. The Class Notional Balance of each Notional Class represents the percentage indicated below of, and reduces to that extent

with, the Class Principal Balance or the outstanding principal or notional balance of the related Trust Asset Group, Groups, Subgroup or Subgroups indicated:

Class	Original Class Notional Balance	Represents Approximately
AI . . . . .	\$ 31,426,543	40.9090909091% of the Group 1 Trust Assets
	23,498,212	40.9090909091% of the Group 3 Trust Assets
	8,467,728	100% of the Group 12 Trust Assets
	<u>\$ 63,392,483</u>	
ES . . . . .	\$ 51,510,883	100% of the Subgroup 7A Trust Assets
IB . . . . .	22,270,670	27.7777777778% of the Group 4 Trust Assets
IC . . . . .	13,165,001	35% of the Group 5 Trust Assets
ID . . . . .	23,498,212	40.9090909091% of the Group 3 Trust Assets
IE . . . . .	\$ 1,497,990	40.9090909091% of the Subgroup 6A and Subgroup 6B Trust Assets (in the aggregate)
	419,760	4.5454545455% of the Subgroup 6C Trust Assets
	<u>\$ 1,917,750</u>	
IJ . . . . .	\$ 14,101,733	100% of the Group 11 Trust Assets
IK . . . . .	8,467,728	100% of the Group 12 Trust Assets
IM . . . . .	\$ 22,270,670	27.7777777778% of the Group 4 Trust Assets
	14,101,733	100% of the Group 11 Trust Assets
	<u>\$ 36,372,403</u>	
IO . . . . .	\$ 31,426,543	40.9090909091% of the Group 1 Trust Assets
JS . . . . .	70,164,898	100% of KF (PT Class)
KI . . . . .	70,164,898	100% of KF (PT Class)
NS . . . . .	105,945,131	100% of the Subgroup 7B Trust Assets
PS . . . . .	66,422,545	100% of PF (PAC/AD Class)
SA . . . . .	1,478,334	69.2307800378% of the Subgroup 10A Trust Assets
SB . . . . .	44,782,130	57.1428567783% of the Subgroup 8A Trust Assets
SC . . . . .	50,169,530	57.1428568175% of the Subgroup 8B Trust Assets
SD . . . . .	22,016,053	57.1428567721% of the Subgroup 8C Trust Assets
SE . . . . .	154,101,076	100% of the Subgroup 7C Trust Assets
SF . . . . .	138,442,910	100% of the Subgroup 7D Trust Assets
SG . . . . .	1,840,653	84.6153527898% of the Subgroup 10B Trust Assets
SH . . . . .	106,281,643	100% of FH (PT Class)
SN . . . . .	37,181,717	100% of FN (PT Class)

**Tax Status:** Double REMIC Series. See “*Certain United States Federal Income Tax Consequences*” in this Supplement and in the Base Offering Circular.

**Regular and Residual Classes:** Class RR is a Residual Class and represents the Residual Interest of the Issuing REMIC and the Pooling REMIC. All other Classes of REMIC Securities are Regular Classes.

## RISK FACTORS

*You should purchase securities only if you understand and are able to bear the associated risks. The risks applicable to your investment depend on the principal and interest type of your securities. This section highlights certain of these risks.*

***The rate of principal payments on the underlying mortgage loans will affect the rate of principal payments on your securities.*** The rate at which you will receive principal payments will depend largely on the rate of principal payments, including prepayments, on the mortgage loans underlying the related trust assets. Any historical data regarding mortgage loan prepayment rates may not be indicative of the rate of future prepayments on the underlying mortgage loans, and no assurances can be given about the rates at which the underlying mortgage loans will prepay. We expect the rate of principal payments on the underlying mortgage loans to vary. Borrowers generally may prepay their mortgage loans at any time without penalty.

The terms of the mortgage loans may be modified to permit, among other things, a partial release of security, which releases a portion of the mortgaged property from the lien securing the related mortgage loan. Partial releases of security may reduce the value of the remaining security and also allow the related borrower to sell the released property and generate proceeds that may be used to prepay the related mortgage loan in whole or in part.

In addition to voluntary prepayments, mortgage loans can be prepaid as a result of governmental mortgage insurance claim payments, loss mitigation arrangements, repurchases or liquidations of defaulted mortgage loans. Although under certain circumstances Ginnie Mae issuers have the option to repurchase defaulted mortgage loans from the related pool underlying a Ginnie Mae MBS certificate, they are not obligated to do so. Defaulted mortgage loans that remain in pools backing Ginnie Mae MBS certificates may be subject to governmental mortgage insurance claim payments, loss mitigation arrangements or foreclosure, which could have the same effect as voluntary prepayments on the cash flow available to pay the securities.

A catastrophic weather event or other natural disaster may affect the rate of principal payments, including prepayments, on the underlying mortgage loans. Any such event may damage the related mortgaged properties that secure the mortgage loans and may lead to a general economic downturn in the affected regions, including job losses and declines in real estate values. A general economic downturn may increase the rate of defaults on the mortgage loans in such areas resulting in prepayments on the related securities due to governmental mortgage insurance claim payments, loss mitigation arrangements, repurchases or liquidations of defaulted mortgage loans. Insurance payments on damaged or destroyed homes may also lead to prepayments on the underlying mortgage loans. Further, in connection with presidentially declared major disasters, Ginnie Mae may authorize optional special assistance to issuers, including expanded buyout authority which allows issuers, upon receiving written approval from Ginnie Mae, to repurchase eligible loans from the related pool underlying a Ginnie Mae MBS certificate, even if such loans are not delinquent or do not otherwise meet the standard conditions for removal or repurchase.

No assurances can be given as to the timing or frequency of any governmental mortgage insurance claim payments, issuer repurchases, loss mitigation arrangements or foreclosure proceedings with respect to defaulted mortgage loans and the resulting effect on the timing or rate of principal payments on your securities.

***Rates of principal payments can reduce your yield.*** The yield on your securities probably will be lower than you expect if:

- you bought your securities at a premium (interest only securities, for example) and principal payments are faster than you expected, or

- you bought your securities at a discount and principal payments are slower than you expected.

In addition, if your securities are interest only securities or securities purchased at a significant premium, you could lose money on your investment if prepayments occur at a rapid rate.

***Under certain circumstances, a Ginnie Mae issuer has the right to repurchase a defaulted mortgage loan from the related pool of mortgage loans underlying a particular Ginnie Mae MBS certificate, the effect of which would be comparable to a prepayment of such mortgage loan.*** At its option and without Ginnie Mae's prior consent, a Ginnie Mae issuer may repurchase any mortgage loan at an amount equal to par less any amounts previously advanced by such issuer in connection with its responsibilities as servicer of such mortgage loan to the extent that (i) in the case of a mortgage loan included in a pool of mortgage loans underlying a Ginnie Mae MBS certificate issued on or before December 1, 2002, such mortgage loan has been delinquent for four consecutive months, and at least one delinquent payment remains uncured or (ii) in the case of a mortgage loan included in a pool of mortgage loans underlying a Ginnie Mae MBS certificate issued on or after January 1, 2003, no payment has been made on such mortgage loan for three consecutive months. Any such repurchase will result in prepayment of the principal balance or reduction in the notional balance of the securities ultimately backed by such mortgage loan. No assurances can be given as to the timing or frequency of any such repurchases.

***The level of LIBOR will affect the yields on floating rate and inverse floating rate securities.*** If LIBOR performs differently from what you expect, the yield on your securities may be lower than you expect. Lower levels of LIBOR will generally reduce the yield on floating rate securities; higher levels of LIBOR will generally reduce the yield on inverse floating rate securities. You should bear in mind that the timing of changes in the level of LIBOR may affect your yield: generally, the earlier a change,

the greater the effect on your yield. It is doubtful that LIBOR will remain constant.

***An investment in the securities is subject to significant reinvestment risk.*** The rate of principal payments on your securities is uncertain. You may be unable to reinvest the payments on your securities at the same returns provided by the securities. Lower prevailing interest rates may result in an unexpected return of principal. In that interest rate climate, higher yielding reinvestment opportunities may be limited. Conversely, higher prevailing interest rates may result in slower returns of principal, and you may not be able to take advantage of higher yielding investment opportunities. The final payment on your security may occur much earlier than the final distribution date.

***Support securities will be more sensitive to rates of principal payments than other securities.*** If principal prepayments result in principal distributions on any distribution date equal to or less than the amount needed to produce scheduled payments on the PAC classes, the support class will not receive any principal distribution on that date. If prepayments result in principal distributions on any distribution date greater than the amount needed to produce scheduled payments on the PAC classes for that distribution date, this excess will be distributed to the support class.

***The rate of payments on the underlying certificates will directly affect the rate of payments on the group 6, 11 and 12 securities.*** The underlying certificates will be sensitive in varying degrees to the rate of payments of principal (including prepayments) of the related mortgage loans.

As described in the related underlying certificate disclosure documents, certain of the trust assets underlying the underlying certificate included in trust asset subgroup 6c are also previously issued certificates that represent beneficial ownership interests in separate trusts. The rate of payments on the previously issued certificates backing this underlying certificate will directly affect the timing and rate of payments on the group 6 securities. You should read the related under-

lying certificate disclosure documents, including the risk factors contained therein, to understand the payments on and related risks of the previously issued certificates backing this underlying certificate.

This supplement contains no information as to whether the underlying certificates have performed as originally anticipated. Additional information as to the underlying certificates may be obtained by performing an analysis of current principal factors of the underlying certificates in light of applicable information contained in the related underlying certificate disclosure documents.

***Up to 10% of the mortgage loans underlying the trust assets may be higher balance mortgage loans.*** Subject to special pooling parameters set forth in the Ginnie Mae Mortgage-Backed Securities Guide, qualifying federally-insured or guaranteed mortgage loans that exceed certain balance thresholds established by Ginnie Mae (“higher balance mortgage loans”) may be included in Ginnie Mae guaranteed pools. There are no historical performance data regarding the prepayment rates for higher balance mortgage loans. If the higher balance mortgage loans prepay faster or slower than expected, the weighted average lives and yields of the related securities are likely to be affected, perhaps significantly. Furthermore, higher balance mortgage loans tend to be concentrated in certain geographic areas, which may experience relatively higher rates of defaults in the event of adverse economic conditions. No assurances can be given about the prepayment experience or performance of the higher balance mortgage loans.

***Changes to, or elimination of, LIBOR could adversely affect your investment in the securities.*** On July 27, 2017, the U.K.-based Financial Conduct Authority (the “FCA”) announced its intention to cease sustaining LIBOR after 2021. The FCA indicated that it does not intend to sustain LIBOR through using its influence or legal powers beyond that date. It is possible that the ICE Benchmark Administration (“IBA”) and the reference banks could continue

to produce LIBOR on the current basis after 2021, if they are willing and able to do so, but it cannot be assured that LIBOR will survive in its current form, or at all. In the event IBA ceases to set or publish a rate for LIBOR, the Trustee shall propose a new index for approval by Ginnie Mae based upon comparable information and methodology. The Trustee shall propose an alternative index only if it receives an opinion of counsel that the selection of such alternative index will not cause the related Trust REMIC or REMICs to lose their classification as REMICs for United States federal income tax purposes. The effect of the FCA’s decision not to sustain LIBOR, or, if changes are ultimately made to LIBOR, the effect of those changes, cannot be predicted. In addition, it cannot be predicted what alternative index would be chosen should this occur. If LIBOR in its current form does not survive or if an alternative index is chosen, the market value and/or liquidity of securities with distributions or interest rates based on LIBOR could be adversely affected.

***The securities may not be a suitable investment for you.*** The securities, especially the group 6, 11 and 12 securities and, in particular, the support, interest only, accrual and residual classes, are not suitable investments for all investors.

In addition, although the sponsor intends to make a market for the purchase and sale of the securities after their initial issuance, it has no obligation to do so. There is no assurance that a secondary market will develop, that any secondary market will continue, or that the price at which you can sell an investment in any class will enable you to realize a desired yield on that investment.

You will bear the market risks of your investment. The market values of the classes are likely to fluctuate. These fluctuations may be significant and could result in significant losses to you.

The secondary markets for mortgage-related securities have experienced periods of illiquidity and can be expected to do so in the future. Illiquidity can have a severely adverse effect on the prices of classes that are especially sensitive to



prepayment or interest rate risk or that have been structured to meet the investment requirements of limited categories of investors.

The residual securities may experience significant adverse tax timing consequences. Accordingly, you are urged to consult tax advisors and to consider the after-tax effect of ownership of a residual security and the suitability of the residual securities to your investment objectives. See *“Certain United States Federal Income Tax Consequences” in this supplement and in the base offering circular.*

You are encouraged to consult advisors regarding the financial, legal, tax and other aspects of an investment in the securities. You should not purchase the securities of any class unless you understand and are able to bear the prepayment,

yield, liquidity and market risks associated with that class.

***The actual characteristics of the underlying mortgage loans will affect the weighted average lives and yields of your securities.***

The yield and decrement tables in this supplement are based on assumed characteristics which are likely to be different from the actual characteristics. As a result, the yields on your securities could be lower than you expected, even if the mortgage loans prepay at the constant prepayment rates set forth in the applicable table.

It is highly unlikely that the underlying mortgage loans will prepay at any of the prepayment rates assumed in this supplement, or at any constant prepayment rate.

## **THE TRUST ASSETS**

### **General**

The Sponsor intends to acquire the Trust Assets in privately negotiated transactions prior to the Closing Date and to sell them to the Trust according to the terms of a Trust Agreement between the Sponsor and the Trustee. The Sponsor will make certain representations and warranties with respect to the Trust Assets. All Trust Assets, regardless of whether the assets consist of Trust MBS or the Underlying Certificates, will evidence, directly or indirectly, Ginnie Mae Certificates.

### **The Trust MBS (Groups 1, 2, 3, 4, 5, 7, 8, 9, 10 and 13 and Subgroups 6A and 6B)**

The Subgroup 6A Trust Assets are either:

1. Ginnie Mae I MBS Certificates guaranteed by Ginnie Mae, or
2. Ginnie Mae Platinum Certificates backed by Ginnie Mae I MBS Certificates and guaranteed by Ginnie Mae.

Each Mortgage Loan underlying a Ginnie Mae I MBS Certificate bears interest at a Mortgage Rate 0.50% per annum greater than the related Certificate Rate. The difference between the Mortgage Rate and the Certificate Rate is used to pay the related servicers of the Mortgage Loans a monthly servicing fee and Ginnie Mae a fee for its guaranty of the Ginnie Mae I MBS Certificate of 0.44% per annum and 0.06% per annum, respectively, of the outstanding principal balance of the Mortgage Loan.

The Group 1, 2, 3, 4, 5, 7, 8, 9, 10 and 13 and Subgroup 6B Trust Assets are either:

1. Ginnie Mae II MBS Certificates guaranteed by Ginnie Mae, or
2. Ginnie Mae Platinum Certificates backed by Ginnie Mae II MBS Certificates and guaranteed by Ginnie Mae.

Each Mortgage Loan underlying a Ginnie Mae II MBS Certificate issued prior to July 1, 2003 bears interest at a Mortgage Rate 0.50% to 1.50% per annum greater than the related Certificate Rate. Each Mortgage Loan underlying a Ginnie Mae II MBS Certificate issued on or after July 1, 2003 bears interest at a Mortgage Rate 0.25% to 0.75% per annum greater than the related Certificate Rate. Ginnie Mae receives a fee (the “Ginnie Mae Certificate Guaranty Fee”) for its guaranty of each Ginnie Mae II MBS Certificate of 0.06% per annum of the outstanding principal balance of each related Mortgage Loan. The difference between (a) the Mortgage Rate and (b) the sum of the Certificate Rate and the rate of the Ginnie Mae Certificate Guaranty Fee is used to pay the related servicers of the Mortgage Loans a monthly servicing fee.

### **The Underlying Certificates (Groups 11 and 12 and Subgroup 6C)**

The Group 11 and 12 and Subgroup 6C Trust Assets are Underlying Certificates that represent beneficial ownership interests in one or more separate trusts, the assets of which evidence direct or indirect beneficial ownership interests in certain Ginnie Mae Certificates. Each Underlying Certificate constitutes all or a portion of a class of a separate Series of certificates described in the related Underlying Certificate Disclosure Document. Each Underlying Certificate Disclosure Document may be obtained from the Information Agent as described under “Available Information” in this Supplement. Investors are cautioned that material changes in facts and circumstances may have occurred since the date of each Underlying Certificate Disclosure Document, including changes in prepayment rates, prevailing interest rates and other economic factors, which may limit the usefulness of, and be directly contrary to the assumptions used in preparing the information included in, the offering document. See *“Underlying Certificates” in the Base Offering Circular*.

Each Underlying Certificate provides for monthly distributions and is further described in the table contained in Exhibit A to this Supplement. The table also sets forth information regarding approximate weighted average remaining terms to maturity, loan ages and mortgage rates of the Mortgage Loans underlying the related Ginnie Mae Certificates.

### **The Mortgage Loans**

The Mortgage Loans underlying the Group 1, 2, 3, 4, 5, 7, 8, 9, 10 and 13 and Subgroup 6A and 6B Trust Assets are expected to have, on a weighted average basis, the characteristics set forth in the Terms Sheet under “Assumed Characteristics of the Mortgage Loans Underlying the Group 1, 2, 3, 4, 5, 7, 8, 9, 10 and 13 and Subgroup 6A and 6B Trust Assets” and the general characteristics described in the Base Offering Circular. The Mortgage Loans underlying the Underlying Certificates are expected to have, on a weighted average basis, the characteristics set forth in Exhibit A to this Supplement. The Mortgage Loans will consist of first lien, single-family, fixed rate, residential mortgage loans that are insured or guaranteed by the Federal Housing Administration, the United States Department of Veterans Affairs, Rural Development (formerly the Rural Housing Service) or the United States Department of Housing and Urban Development (“HUD”). See *“The Ginnie Mae Certificates — General” in the Base Offering Circular*.

Specific information regarding the characteristics of the Mortgage Loans underlying the Trust MBS is not available. For purposes of this Supplement, certain assumptions have been made regarding the remaining terms to maturity, loan ages and, in the case of the Group 1, 2, 3, 4, 5, 7, 8, 9, 10 and 13 and Subgroup 6B Trust Assets, Mortgage Rates of the Mortgage Loans underlying the Trust MBS. However, the actual remaining terms to maturity, loan ages and, in the case of the Group 1, 2, 3, 4, 5, 7, 8, 9, 10 and 13 and Subgroup 6B Trust Assets, Mortgage Rates of many of the Mortgage Loans will differ from the characteristics assumed, perhaps significantly. This will be the case even if the weighted average characteristics of the Mortgage Loans are the same as the assumed characteristics. Small differences in the characteristics of the Mortgage Loans can have a significant effect on the Weighted Average



Lives and yields of the Securities. See *“Risk Factors” and “Yield, Maturity and Prepayment Considerations” in this Supplement.*

### **The Trustee Fee**

The Sponsor will contribute certain Ginnie Mae Certificates in respect of the Trustee Fee. On each Distribution Date, the Trustee will retain all principal and interest distributions received on such Ginnie Mae Certificates in payment of the Trustee Fee.

## **GINNIE MAE GUARANTY**

The Government National Mortgage Association (“Ginnie Mae”), a wholly-owned corporate instrumentality of the United States of America within HUD, guarantees the timely payment of principal and interest on the Securities. The General Counsel of HUD has provided an opinion to the effect that Ginnie Mae has the authority to guarantee multiclass securities and that Ginnie Mae guaranties will constitute general obligations of the United States, for which the full faith and credit of the United States is pledged. See *“Ginnie Mae Guaranty” in the Base Offering Circular.*

## **DESCRIPTION OF THE SECURITIES**

### **General**

The description of the Securities contained in this Supplement is not complete and is subject to, and is qualified in its entirety by reference to, all of the provisions of the Trust Agreement. See *“Description of the Securities” in the Base Offering Circular.*

### **Form of Securities**

Each Class of Securities other than the Residual Securities initially will be issued and maintained, and may be transferred only on the Fedwire Book-Entry System. Beneficial Owners of Book-Entry Securities will ordinarily hold these Securities through one or more financial intermediaries, such as banks, brokerage firms and securities clearing organizations that are eligible to maintain book-entry accounts on the Fedwire Book-Entry System. By request accompanied by the payment of a transfer fee of \$25,000 per Certificated Security to be issued, a Beneficial Owner may receive a Regular Security in certificated form.

The Residual Securities will not be issued in book-entry form but will be issued in fully registered, certificated form and may be transferred or exchanged, subject to the transfer restrictions applicable to Residual Securities set forth in the Trust Agreement, at the Corporate Trust Office of the Trustee. See *“Description of the Securities — Forms of Securities; Book-Entry Procedures” in the Base Offering Circular.*

Each Regular and MX Class (other than the Increased Minimum Denomination Classes) will be issued in minimum dollar denominations of initial principal balance of \$1,000 and integral multiples of \$1 in excess of \$1,000. The Increased Minimum Denomination Classes will be issued in minimum denominations that equal \$100,000 in initial notional balance.

### **Distributions**

Distributions on the Securities will be made on each Distribution Date as specified under “Terms Sheet — Distribution Date” in this Supplement. On each Distribution Date for a Security, or in the case of the Certificated Securities, on the first Business Day after the related Distribution Date, the Distribution Amount will be distributed to the Holders of record as of the related Record Date. Beneficial

Owners of Book-Entry Securities will receive distributions through credits to accounts maintained for their benefit on the books and records of the appropriate financial intermediaries. Holders of Certificated Securities will receive distributions by check or, subject to the restrictions set forth in the Base Offering Circular, by wire transfer. See “*Description of the Securities — Distributions*” and “*— Method of Distributions*” in the Base Offering Circular.

### **Interest Distributions**

The Interest Distribution Amount will be distributed on each Distribution Date to the Holders of all Classes of Securities entitled to distributions of interest.

- Interest will be calculated on the basis of a 360-day year consisting of twelve 30-day months.
- Interest distributable (or accrued in the case of an Accrual Class) on any Class for any Distribution Date will consist of 30 days’ interest on its Class Principal Balance (or Class Notional Balance) as of the related Record Date.
- Investors can calculate the amount of interest to be distributed (or accrued in the case of an Accrual Class) on each Class of Securities for any Distribution Date by using the Class Factors published in the preceding month. See “*— Class Factors*” below.

### *Categories of Classes*

For purposes of interest distributions, the Classes will be categorized as shown under “Interest Type” on the front cover of this Supplement and on Schedule I to this Supplement. The abbreviations used in this Supplement to describe the interest entitlements of the Classes are explained under “Class Types” in Appendix I to the Base Offering Circular.

### *Accrual Periods*

The Accrual Period for each Regular and MX Class is set forth in the table below:

<u>Class</u>	<u>Accrual Period</u>
Fixed Rate Classes	The calendar month preceding the related Distribution Date
Floating Rate and Inverse Floating Rate Classes	From the 20th day of the month preceding the month of the related Distribution Date through the 19th day of the month of that Distribution Date

### *Fixed Rate Classes*

Each Fixed Rate Class will bear interest at the per annum Interest Rate shown on the front cover of this Supplement or on Schedule I to this Supplement.

### *Floating Rate and Inverse Floating Rate Classes*

The Floating Rate and Inverse Floating Rate Classes will bear interest as shown under “Terms Sheet — Interest Rates” in this Supplement. The Interest Rates for the Floating Rate and Inverse Floating Rate Classes will be based on LIBOR. The Trustee or its agent will determine LIBOR on the basis of the ICE LIBOR method, as described under “Description of the Securities — Interest Rate Indices — Determination of LIBOR — ICE LIBOR” in the Base Offering Circular.

We can provide no assurance that LIBOR for a Distribution Date accurately represents the offered rate at which one-month U.S. dollar deposits are being quoted to prime banks in the London interbank market, nor that the procedures for calculating LIBOR on the basis of the ICE LIBOR method for

one-month U.S. dollar deposits will not change. Any change in LIBOR values resulting from any change in reporting or in the determination of LIBOR may cause LIBOR to fluctuate disproportionately to changes in other market lending rates.

The Trustee's determination of LIBOR and its calculation of the Interest Rates will be final except in the case of clear error. Investors can obtain LIBOR levels and Interest Rates for the current and preceding Accrual Periods from Ginnie Mae's Multiclass Securities e-Access located on Ginnie Mae's website ("e-Access") or by calling the Information Agent at (800) 234-GNMA.

#### *Accrual Classes*

Each of Classes BZ, CZ, VZ, Z, ZC, ZD, ZE, ZH, ZM and ZN is an Accrual Class. Interest will accrue on the Accrual Classes and be distributed as described under "Terms Sheet — Accrual Classes" in this Supplement.

### **Principal Distributions**

The Principal Distribution Amount for each Group or Subgroup, as applicable, and each Accrual Amount will be distributed to the Holders entitled thereto as described under "Terms Sheet — Allocation of Principal" in this Supplement. Investors can calculate the amount of principal to be distributed with respect to any Distribution Date by using the Class Factors published in the preceding and current months. See "*— Class Factors*" below.

#### *Categories of Classes*

For purposes of principal distributions, the Classes will be categorized as shown under "Principal Type" on the front cover of this Supplement and on Schedule I to this Supplement. The abbreviations used in this Supplement to describe the principal entitlements of the Classes are explained under "Class Types" in Appendix I to the Base Offering Circular.

#### *Notional Classes*

The Notional Classes will not receive principal distributions. For convenience in describing interest distributions, the Notional Classes will have the original Class Notional Balances shown on the front cover of this Supplement and on Schedule I to this Supplement. The Class Notional Balances will be reduced as shown under "Terms Sheet — Notional Classes" in this Supplement.

### **Residual Securities**

The Class RR Securities will represent the beneficial ownership of the Residual Interest in the Issuing REMIC and the beneficial ownership of the Residual Interest in the Pooling REMIC, as described in "Certain United States Federal Income Tax Consequences" in the Base Offering Circular. The Class RR Securities have no Class Principal Balance and do not accrue interest. The Class RR Securities will be entitled to receive the proceeds of the disposition of any assets remaining in the Trust REMICs after the Class Principal Balance or Class Notional Balance of each Class of Regular Securities has been reduced to zero. However, any remaining proceeds are not likely to be significant. The Residual Securities may not be transferred to a Plan Investor, a Non-U.S. Person or a Disqualified Organization.

### **Class Factors**

The Trustee will calculate and make available for each Class of Securities, no later than the day preceding the Distribution Date, the factor (carried out to eight decimal places) that when multiplied by the Original Class Principal Balance (or original Class Notional Balance) of that Class, determines the

Class Principal Balance (or Class Notional Balance) after giving effect to the distribution of principal to be made on the Securities (and any addition to the Class Principal Balance of an Accrual Class) or any reduction of Class Notional Balance on that Distribution Date (each, a “Class Factor”).

- The Class Factor for any Class of Securities for each month following the issuance of the Securities will reflect its remaining Class Principal Balance (or Class Notional Balance) after giving effect to any principal distribution (or addition to principal) to be made or any reduction of Class Notional Balance on the Distribution Date occurring in that month.
- The Class Factor for each Class for the month of issuance is 1.00000000.
- The Class Factors for the MX Classes and the Classes of REMIC Securities that are exchangeable for the MX Classes will be calculated assuming that the maximum possible amount of each Class is outstanding at all times, regardless of any exchanges that may occur.
- Based on the Class Factors published in the preceding and current months (and Interest Rates), investors in any Class (other than an Accrual Class) can calculate the amount of principal and interest to be distributed to that Class and investors in an Accrual Class can calculate the total amount of principal to be distributed to (or interest to be added to the Class Principal Balance of) that Class on the Distribution Date in the current month.
- Investors may obtain current Class Factors on e-Access.

*See “Description of the Securities — Distributions” in the Base Offering Circular.*

### **Termination**

The Trustee, at its option, may purchase or cause the sale of the Trust Assets and thereby terminate the Trust on any Distribution Date on which the aggregate of the Class Principal Balances of the Securities is less than 1% of the aggregate Original Class Principal Balances of the Securities. On any Distribution Date upon the Trustee’s determination that the REMIC status of any Trust REMIC has been lost or that a substantial risk exists that this status will be lost for the then current taxable year, the Trustee will terminate the Trust and retire the Securities.

Upon any termination of the Trust, the Holder of any outstanding Security (other than a Residual or Notional Class Security) will be entitled to receive that Holder’s allocable share of the Class Principal Balance of that Class plus any accrued and unpaid interest thereon at the applicable Interest Rate, and any Holder of any outstanding Notional Class Security will be entitled to receive that Holder’s allocable share of any accrued and unpaid interest thereon at the applicable Interest Rate. The Residual Holders will be entitled to their pro rata share of any assets remaining in the Trust REMICs after payment in full of the amounts described in the foregoing sentence. However, any remaining assets are not likely to be significant.

### **Modification and Exchange**

All or a portion of the Classes of REMIC Securities specified on the front cover may be exchanged for a proportionate interest in the related MX Class or Classes shown on Schedule I to this Supplement. Similarly, all or a portion of the related MX Class may be exchanged for proportionate interests in the related Classes of REMIC Securities and, in the case of Combination 10, other related MX Classes. This process may occur repeatedly.

Each exchange may be effected only in proportions that result in the principal and interest entitlements of the Securities received being equal to the entitlements of the Securities surrendered.

A Beneficial Owner proposing to effect an exchange must notify the Trustee through the Beneficial Owner’s Book-Entry Depository participant. This notice must be received by the Trustee not later than

two Business Days before the proposed exchange date. The exchange date can be any Business Day other than the last Business Day of the month. The notice must contain the outstanding principal or notional balances of the Securities to be included in the exchange and the proposed exchange date. The notice is required to be delivered to the Trustee by email to USBGNMATEam@USBank.com or in writing at its Corporate Trust Office at U.S. Bank National Association, One Federal Street, 3rd Floor, Boston, MA 02110, Attention: Ginnie Mae REMIC Program Agency Group 2019-020. The Trustee may be contacted by telephone at (617) 603-6451 and by fax at (617) 603-6644.

A fee will be payable to the Trustee in connection with each exchange equal to  $\frac{1}{32}$  of 1% of the outstanding principal balance (or notional balance) of the Securities surrendered for exchange (but not less than \$2,000 or more than \$25,000); provided, however, that no fee will be payable in respect of an interest only security unless all securities involved in the exchange are interest only securities. The fee must be paid concurrently with the exchange.

The first distribution on a REMIC Security or an MX Security received in an exchange will be made on the Distribution Date in the month following the month of the exchange. The distribution will be made to the Holder of record as of the Record Date in the month of exchange.

*See "Description of the Securities — Modification and Exchange" in the Base Offering Circular.*

## **YIELD, MATURITY AND PREPAYMENT CONSIDERATIONS**

### **General**

The prepayment experience of the Mortgage Loans will affect the Weighted Average Lives of and the yields realized by investors in the related Securities.

- The Mortgage Loans do not contain "due-on-sale" provisions, and any Mortgage Loan may be prepaid in full or in part at any time without penalty.
- The rate of payments (including prepayments and payments in respect of liquidations) on the Mortgage Loans is dependent on a variety of economic, geographic, social and other factors, including prevailing market interest rates and general economic factors.

The rate of prepayments with respect to single-family mortgage loans has fluctuated significantly in recent years. Although there is no assurance that prepayment patterns for the Mortgage Loans will conform to patterns for more traditional types of conventional fixed rate mortgage loans, generally:

- if mortgage interest rates fall materially below the Mortgage Rates on any of the Mortgage Loans (giving consideration to the cost of refinancing), the rate of prepayment of those Mortgage Loans would be expected to increase; and
- if mortgage interest rates rise materially above the Mortgage Rates on any of the Mortgage Loans, the rate of prepayment of those Mortgage Loans would be expected to decrease.

In addition, following any Mortgage Loan default and the subsequent liquidation of the underlying Mortgaged Property, the principal balance of the Mortgage Loan will be distributed through a combination of liquidation proceeds, advances from the related Ginnie Mae Issuer and, to the extent necessary, proceeds of Ginnie Mae's guaranty of the Ginnie Mae Certificates. As a result, defaults experienced on the Mortgage Loans will accelerate the distribution of principal of the Securities.

The terms of the Mortgage Loans may be modified to permit, among other things, a partial release of security, which releases a portion of the mortgaged property from the lien securing the related Mortgage Loan. Partial releases of security may allow the related borrower to sell the released property and generate proceeds that may be used to prepay the related Mortgage Loan in whole or in part.

Under certain circumstances, the Trustee has the option to purchase the Trust Assets, thereby effecting early retirement of the Securities. See “Description of the Securities — Termination” in this Supplement.

Investors in the Group 6, 11 and 12 Securities are urged to review the discussion under “Risk Factors — The rate of payments on the underlying certificates will directly affect the rate of payments on the group 6, 11 and 12 securities” in this Supplement.

**Accretion Directed Classes**

Classes A, B, C, D, E, M, PF, PH, VA, VH, VN and ZH are Accretion Directed Classes. The related Accrual Amounts will be applied to making principal distributions on those Classes as described in this Supplement. Class PS is a Notional Class whose Class Notional Balance is determined by reference to the Class Principal Balance of the related Accretion Directed Class shown under “Terms Sheet — Notional Classes” in this Supplement.

Each of the Accretion Directed Classes has the AD designation in the suffix position, rather than the prefix position, in its class principal type because it does not have principal payment stability through the applicable pricing prepayment assumption. Classes VA, VH and VN will have principal payment stability only through the prepayment rate shown in the table below and within their Effective Range, if applicable. The remaining Accretion Directed Classes are not listed in the table below because, although they are entitled to receive payments from the related Accrual Amounts, they do not have principal payment stability through any constant prepayment rate significantly higher than 0% PSA, except within any applicable Effective Range.

The Accretion Directed Classes are entitled to principal payments in an amount equal to interest accrued on the related Accrual Classes. With respect to the Classes listed in the table below, the Weighted Average Life of each such Class cannot exceed its Weighted Average Life as shown in the following table under any constant prepayment scenario, even a scenario where there are no prepayments.

- Moreover, based on the Modeling Assumptions, if the related Mortgage Loans prepay at any constant rate at or below the rate for an Accretion Directed Class shown in the table below, the Class Principal Balance of such Class would be reduced to zero on, but not before, its Final Distribution Date, and the Weighted Average Life of such Class would equal its maximum Weighted Average Life shown in the table below.
- However, the Weighted Average Lives of Classes VA, VH and VN will be reduced, and may be reduced significantly, at prepayment speeds higher than the constant rates shown in the table below. See “Yield, Maturity and Prepayment Considerations — Decrement Tables” in this Supplement.

**Accretion Directed Classes**

<u>Class</u>	<u>Maximum Weighted Average Life (in years)<sup>(1)</sup></u>	<u>Final Distribution Date</u>	<u>Prepayment Rate at or below</u>
VA .....	6.0	June 2030	126% PSA
VH .....	6.0	June 2030	112% PSA
VN .....	6.0	June 2030	197% PSA

<sup>(1)</sup> The maximum Weighted Average Life for each Class shown in this table is based on the Modeling Assumptions and the assumption that the related Mortgage Loans prepay at any constant rate at or below the rate shown in the table for such Class.



The Mortgage Loans will have characteristics that differ from those of the Modeling Assumptions. Therefore, even if the related Mortgage Loans prepay at a rate at or somewhat below the “at or below” rate shown for Class VA, VH or VN, the Class Principal Balance of such Class could be reduced to zero before its Final Distribution Date, and its Weighted Average Life could be shortened.

**Securities that Receive Principal on the Basis of Schedules**

As described in this Supplement, each PAC Class will receive principal payments in accordance with a schedule calculated on the basis of, among other things, a Structuring Range. See “Terms Sheet — Scheduled Principal Balances.” However, whether any such Class will adhere to its schedule and receive “Scheduled Payments” on a Distribution Date will largely depend on the level of prepayments experienced by the related Mortgage Loans.

Each PAC Class exhibits an Effective Range of constant prepayment rates at which such Class will receive Scheduled Payments. That range used to create the related principal balance schedule. Based on the Modeling Assumptions, the *initial* Effective Range for the PAC Classes is as follows:

	<u>Initial Effective Range</u>
<b>PAC Classes</b>	
PF, PH, VH and ZH (in the aggregate) . . . . .	225% PSA through 349% PSA

- The principal payment stability of the PAC Classes will be supported by the Support Class.

**If the Class supporting a given Class is retired before the Class being supported is retired, the outstanding Class will no longer have an Effective Range and will become more sensitive to prepayments on the related Mortgage Loans.**

There is no assurance that the related Mortgage Loans will have the characteristics assumed in the Modeling Assumptions, which were used to determine the initial Effective Range. If the initial Effective Range were calculated using the actual characteristics of the related Mortgage Loans, the initial Effective Range could differ from that shown in the above table. Therefore, even if the Mortgage Loans were to prepay at a constant rate within the initial Effective Range shown for any Class in the above table, that Class could fail to receive Scheduled Payments.

Moreover, the related Mortgage Loans will not prepay at any *constant* rate. Non-constant prepayment rates can cause any PAC Class not to receive Scheduled Payments, even if prepayment rates remain within the initial Effective Range for that Class. Further, the Effective Range for any PAC Class can narrow, shift over time or cease to exist depending on the actual characteristics of the related Mortgage Loans.

If the related Mortgage Loans prepay at rates that are generally below the Effective Range for any PAC Class, the amount available to pay principal on the Securities may be insufficient to produce Scheduled Payments on such PAC Class, and its Weighted Average Life may be extended, perhaps significantly.

If the related Mortgage Loans prepay at rates that are generally above the Effective Range for any PAC Class, its supporting Class may be retired earlier than that PAC Class, and its Weighted Average Life may be shortened, perhaps significantly.

## **Assumability**

Each Mortgage Loan may be assumed, subject to HUD review and approval, upon the sale of the related Mortgaged Property. See *“Yield, Maturity and Prepayment Considerations — Assumability of Government Loans” in the Base Offering Circular.*

## **Final Distribution Date**

The Final Distribution Date for each Class, which is set forth on the front cover of this Supplement or on Schedule I to this Supplement, is the latest date on which the related Class Principal Balance or Class Notional Balance will be reduced to zero.

- The actual retirement of any Class may occur earlier than its Final Distribution Date.
- According to the terms of the Ginnie Mae Guaranty, Ginnie Mae will guarantee payment in full of the Class Principal Balance of each Class of Securities no later than its Final Distribution Date.

## **Modeling Assumptions**

Unless otherwise indicated, the tables that follow have been prepared on the basis of the characteristics of the Underlying Certificates, the priorities of distributions on the Underlying Certificates and the following assumptions (the “Modeling Assumptions”), among others:

1. The Mortgage Loans underlying the Group 1, 2, 3, 4, 5, 7, 8, 9, 10 and 13 and Subgroup 6A and 6B Trust Assets have the assumed characteristics shown under “Assumed Characteristics of the Mortgage Loans Underlying the Group 1, 2, 3, 4, 5, 7, 8, 9, 10 and 13 and Subgroup 6A and 6B Trust Assets” in the Terms Sheet, except in the case of information set forth under the 0% PSA Prepayment Assumption Rate, for which each Mortgage Loan underlying a Group 1, 2, 3, 4, 5, 7, 8, 9, 10 or 13 or Subgroup 6A or 6B Trust Asset is assumed to have an original and a remaining term to maturity of 360 months and each Mortgage Loan underlying a Group 1, 2, 3, 4, 5, 7, 8, 9, 10 or 13 or Subgroup 6B Trust Asset is assumed to have a Mortgage Rate of 1.50% per annum higher than the related Certificate Rate.

2. The Mortgage Loans prepay at the constant percentages of PSA (described below) shown in the related table.

3. Distributions on the Securities are always received on the 20th day of the month, whether or not a Business Day, commencing in March 2019.

4. A termination of the Trust or the Underlying Trusts does not occur.

5. The Closing Date for the Securities is February 28, 2019.

6. No expenses or fees are paid by the Trust other than the Trustee Fee, which is paid as described under “The Trust Assets — The Trustee Fee” in this Supplement.

7. Distributions on the Underlying Certificates are made as described in the related Underlying Certificate Disclosure Documents.

8. Each Class is held from the Closing Date and is not exchanged in whole or in part.

When reading the tables and the related text, investors should bear in mind that the Modeling Assumptions, like any other stated assumptions, are unlikely to be entirely consistent with actual experience.

- For example, most of the Mortgage Loans will not have the characteristics assumed, many Distribution Dates will occur on a Business Day after the 20th day of the month, and the Trustee may cause a termination of the Trust as described under “Description of the Securities — Termination” in this Supplement.



- In addition, distributions on the Securities are based on Certificate Factors and Calculated Certificate Factors, as applicable, which may not reflect actual receipts on the Trust Assets.

See “Description of the Securities — Distributions” in the Base Offering Circular.

## Decrement Tables

Prepayments of mortgage loans are commonly measured by a prepayment standard or model. The model used in this Supplement, Prepayment Speed Assumption (“PSA”), is the standard prepayment assumption model of The Securities Industry and Financial Markets Association. PSA represents an assumed rate of prepayment each month relative to the then outstanding principal balance of the Mortgage Loans to which the model is applied. See “Yield, Maturity and Prepayment Considerations — Standard Prepayment Assumption Models” in the Base Offering Circular.

The decrement tables set forth below are based on the assumption that the Mortgage Loans prepay at the indicated percentages of PSA (the “PSA Prepayment Assumption Rates”). As used in the tables, each of the PSA Prepayment Assumption Rates reflects a percentage of the 100% PSA assumed prepayment rate. **The Mortgage Loans will not prepay at any of the PSA Prepayment Assumption Rates, and the timing of changes in the rate of prepayments actually experienced on the Mortgage Loans will not follow the pattern described for the PSA assumption.**

The decrement tables set forth below illustrate the percentage of the Original Class Principal Balance (or, in the case of a Notional Class, the original Class Notional Balance) that would remain outstanding following the distribution made each specified month for each Regular or MX Class, based on the assumption that the related Mortgage Loans prepay at the PSA Prepayment Assumption Rates. The percentages set forth in the following decrement tables have been rounded to the nearest whole percentage (including rounding down to zero).

The decrement tables also indicate the Weighted Average Life of each Class under each PSA Prepayment Assumption Rate. The Weighted Average Life of each Class is calculated by:

- (a) multiplying the net reduction, if any, of the Class Principal Balance (or the net reduction of the Class Notional Balance, in the case of a Notional Class) from one Distribution Date to the next Distribution Date by the number of years from the date of issuance thereof to the related Distribution Date,
- (b) summing the results, and
- (c) dividing the sum by the aggregate amount of the assumed net reductions in principal balance or notional balance, as applicable, referred to in clause (a).

The information shown for each Notional Class is for illustrative purposes only, as a Notional Class is not entitled to distributions of principal and has no Weighted Average Life. The Weighted Average Life shown for each Notional Class has been calculated on the assumption that a reduction in the Class Notional Balance thereof is a distribution of principal.

**The Weighted Average Lives are likely to vary, perhaps significantly, from those set forth in the tables below due to the differences between the actual characteristics of the Mortgage Loans underlying the related Trust Assets and the Modeling Assumptions.**

## Percentages of Original Class Principal (or Class Notional) Balances and Weighted Average Lives

Security Group 1 PSA Prepayment Assumption Rates															
Distribution Date	Class A					Class IO					Class Z				
	0%	150%	315%	500%	700%	0%	150%	315%	500%	700%	0%	150%	315%	500%	700%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
February 2020	99	87	77	66	54	99	88	79	68	56	103	103	103	103	103
February 2021	97	76	59	43	28	98	77	61	46	31	107	107	107	107	107
February 2022	96	66	45	27	13	97	68	48	31	18	110	110	110	110	110
February 2023	95	56	33	16	5	95	59	37	21	10	114	114	114	114	114
February 2024	93	48	24	9	0	94	51	29	14	5	118	118	118	118	115
February 2025	91	40	17	4	0	93	44	22	9	3	121	121	121	121	63
February 2026	89	33	12	0	0	91	38	17	6	2	126	126	126	126	35
February 2027	88	27	7	0	0	89	32	13	4	1	130	130	130	84	19
February 2028	85	22	3	0	0	88	27	10	3	0	134	134	134	55	10
February 2029	83	17	1	0	0	86	22	7	2	0	138	138	138	35	5
February 2030	81	12	0	0	0	84	18	5	1	0	143	143	111	22	3
February 2031	78	8	0	0	0	82	15	4	1	0	148	148	79	14	1
February 2032	76	5	0	0	0	79	11	3	0	0	152	152	55	8	1
February 2033	73	1	0	0	0	77	9	2	0	0	158	158	37	5	0
February 2034	70	0	0	0	0	74	6	1	0	0	163	129	23	3	0
February 2035	66	0	0	0	0	71	4	1	0	0	168	81	13	1	0
February 2036	63	0	0	0	0	68	2	0	0	0	174	38	5	0	0
February 2037	59	0	0	0	0	65	0	0	0	0	179	0	0	0	0
February 2038	55	0	0	0	0	61	0	0	0	0	185	0	0	0	0
February 2039	51	0	0	0	0	57	0	0	0	0	191	0	0	0	0
February 2040	46	0	0	0	0	53	0	0	0	0	198	0	0	0	0
February 2041	41	0	0	0	0	49	0	0	0	0	204	0	0	0	0
February 2042	36	0	0	0	0	44	0	0	0	0	211	0	0	0	0
February 2043	30	0	0	0	0	39	0	0	0	0	218	0	0	0	0
February 2044	24	0	0	0	0	34	0	0	0	0	225	0	0	0	0
February 2045	18	0	0	0	0	28	0	0	0	0	233	0	0	0	0
February 2046	11	0	0	0	0	22	0	0	0	0	240	0	0	0	0
February 2047	3	0	0	0	0	15	0	0	0	0	248	0	0	0	0
February 2048	0	0	0	0	0	8	0	0	0	0	165	0	0	0	0
February 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	18.5	5.5	3.3	2.1	1.5	19.9	6.2	3.9	2.5	1.7	29.2	16.1	12.8	9.3	6.6

Security Group 2 PSA Prepayment Assumption Rates					
Distribution Date	Classes JF, JK, JS, KF and KI				
	0%	150%	315%	500%	700%
Initial Percent	100	100	100	100	100
February 2020	99	95	91	86	81
February 2021	97	86	75	64	52
February 2022	96	77	60	44	30
February 2023	95	69	48	30	17
February 2024	93	61	38	21	10
February 2025	91	55	30	14	5
February 2026	90	49	24	10	3
February 2027	88	43	19	7	2
February 2028	86	38	15	4	1
February 2029	84	34	12	3	1
February 2030	81	30	9	2	0
February 2031	79	26	7	1	0
February 2032	77	23	6	1	0
February 2033	74	20	4	1	0
February 2034	71	17	3	0	0
February 2035	68	15	3	0	0
February 2036	65	13	2	0	0
February 2037	61	11	2	0	0
February 2038	58	9	1	0	0
February 2039	54	8	1	0	0
February 2040	50	6	1	0	0
February 2041	46	5	0	0	0
February 2042	41	4	0	0	0
February 2043	36	3	0	0	0
February 2044	31	3	0	0	0
February 2045	26	2	0	0	0
February 2046	20	1	0	0	0
February 2047	14	1	0	0	0
February 2048	7	0	0	0	0
February 2049	0	0	0	0	0
Weighted Average Life (years)	19.3	8.5	5.0	3.4	2.5

**Security Group 3  
PSA Prepayment Assumption Rates**

Distribution Date	Class D					Class ID					Class ZD				
	0%	150%	315%	500%	700%	0%	150%	315%	500%	700%	0%	150%	315%	500%	700%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
February 2020	99	88	78	66	54	99	88	79	68	56	103	103	103	103	103
February 2021	98	76	60	43	28	98	78	62	46	32	107	107	107	107	107
February 2022	96	66	45	28	14	97	68	48	31	18	110	110	110	110	110
February 2023	95	57	34	17	5	95	59	37	21	10	114	114	114	114	114
February 2024	93	49	25	9	1	94	52	29	14	5	118	118	118	118	118
February 2025	91	41	18	4	0	93	45	22	9	3	121	121	121	121	73
February 2026	90	35	12	1	0	91	38	17	6	2	126	126	126	126	40
February 2027	88	29	8	0	0	89	33	13	4	1	130	130	130	97	22
February 2028	86	23	4	0	0	88	28	10	3	0	134	134	134	63	12
February 2029	84	18	2	0	0	86	23	7	2	0	138	138	138	41	6
February 2030	81	14	0	0	0	84	19	5	1	0	143	143	130	26	3
February 2031	79	10	0	0	0	82	15	4	1	0	148	148	94	16	2
February 2032	76	6	0	0	0	79	12	3	0	0	152	152	67	10	1
February 2033	73	3	0	0	0	77	9	2	0	0	158	158	45	6	0
February 2034	70	0	0	0	0	74	7	1	0	0	163	163	29	3	0
February 2035	67	0	0	0	0	71	5	1	0	0	168	111	18	2	0
February 2036	63	0	0	0	0	68	3	0	0	0	174	62	9	1	0
February 2037	60	0	0	0	0	65	1	0	0	0	179	19	2	0	0
February 2038	56	0	0	0	0	61	0	0	0	0	185	0	0	0	0
February 2039	52	0	0	0	0	57	0	0	0	0	191	0	0	0	0
February 2040	47	0	0	0	0	53	0	0	0	0	198	0	0	0	0
February 2041	42	0	0	0	0	49	0	0	0	0	204	0	0	0	0
February 2042	37	0	0	0	0	44	0	0	0	0	211	0	0	0	0
February 2043	31	0	0	0	0	39	0	0	0	0	218	0	0	0	0
February 2044	25	0	0	0	0	34	0	0	0	0	225	0	0	0	0
February 2045	19	0	0	0	0	28	0	0	0	0	233	0	0	0	0
February 2046	12	0	0	0	0	22	0	0	0	0	240	0	0	0	0
February 2047	5	0	0	0	0	15	0	0	0	0	248	0	0	0	0
February 2048	0	0	0	0	0	8	0	0	0	0	186	0	0	0	0
February 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	18.7	5.7	3.4	2.2	1.5	19.9	6.3	3.9	2.5	1.7	29.3	16.7	13.3	9.6	6.8

**Security Groups 1 and 3  
PSA Prepayment Assumption Rates**

Distribution Date	Class ZG				
	0%	150%	315%	500%	700%
Initial Percent	100	100	100	100	100
February 2020	103	103	103	103	103
February 2021	107	107	107	107	107
February 2022	110	110	110	110	110
February 2023	114	114	114	114	114
February 2024	118	118	118	118	116
February 2025	121	121	121	121	67
February 2026	126	126	126	126	37
February 2027	130	130	130	89	20
February 2028	134	134	134	58	11
February 2029	138	138	138	37	6
February 2030	143	143	119	24	3
February 2031	148	148	85	15	2
February 2032	152	152	60	9	1
February 2033	158	158	40	5	0
February 2034	163	143	26	3	0
February 2035	168	93	15	1	0
February 2036	174	48	7	1	0
February 2037	179	8	1	0	0
February 2038	185	0	0	0	0
February 2039	191	0	0	0	0
February 2040	198	0	0	0	0
February 2041	204	0	0	0	0
February 2042	211	0	0	0	0
February 2043	218	0	0	0	0
February 2044	225	0	0	0	0
February 2045	233	0	0	0	0
February 2046	240	0	0	0	0
February 2047	248	0	0	0	0
February 2048	173	0	0	0	0
February 2049	0	0	0	0	0
Weighted Average Life (years)	29.3	16.3	13.0	9.4	6.7

**Security Group 4  
PSA Prepayment Assumption Rates**

Distribution Date	Class B					Class BZ					Class IB				
	0%	150%	315%	500%	700%	0%	150%	315%	500%	700%	0%	150%	315%	500%	700%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
February 2020	98	87	77	66	53	103	103	103	103	103	99	88	79	68	56
February 2021	97	76	59	42	26	107	107	107	107	107	97	78	62	46	32
February 2022	95	66	44	26	11	110	110	110	110	110	96	69	49	31	18
February 2023	93	56	33	15	3	114	114	114	114	114	95	60	38	21	10
February 2024	91	48	23	7	0	118	118	118	118	85	93	53	30	14	6
February 2025	89	40	16	2	0	121	121	121	121	47	91	46	23	9	3
February 2026	87	34	10	0	0	126	126	126	97	26	90	40	18	6	2
February 2027	85	27	6	0	0	130	130	130	64	14	88	34	14	4	1
February 2028	82	22	2	0	0	134	134	134	42	8	86	29	10	3	1
February 2029	80	17	0	0	0	138	138	121	28	4	84	25	8	2	0
February 2030	77	13	0	0	0	143	143	91	18	2	81	21	6	1	0
February 2031	74	8	0	0	0	148	148	68	12	1	79	18	4	1	0
February 2032	71	5	0	0	0	152	152	50	7	1	77	14	3	0	0
February 2033	68	2	0	0	0	158	158	36	5	0	74	12	2	0	0
February 2034	65	0	0	0	0	163	142	25	3	0	71	9	2	0	0
February 2035	61	0	0	0	0	168	109	17	2	0	68	7	1	0	0
February 2036	57	0	0	0	0	174	80	11	1	0	65	5	1	0	0
February 2037	53	0	0	0	0	179	54	7	0	0	61	4	0	0	0
February 2038	49	0	0	0	0	185	32	4	0	0	58	2	0	0	0
February 2039	44	0	0	0	0	191	12	1	0	0	54	1	0	0	0
February 2040	40	0	0	0	0	198	0	0	0	0	50	0	0	0	0
February 2041	35	0	0	0	0	204	0	0	0	0	46	0	0	0	0
February 2042	29	0	0	0	0	211	0	0	0	0	41	0	0	0	0
February 2043	24	0	0	0	0	218	0	0	0	0	36	0	0	0	0
February 2044	18	0	0	0	0	225	0	0	0	0	31	0	0	0	0
February 2045	11	0	0	0	0	233	0	0	0	0	26	0	0	0	0
February 2046	4	0	0	0	0	240	0	0	0	0	20	0	0	0	0
February 2047	0	0	0	0	0	208	0	0	0	0	14	0	0	0	0
February 2048	0	0	0	0	0	107	0	0	0	0	7	0	0	0	0
February 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	17.3	5.5	3.2	2.0	1.4	28.9	17.2	12.7	8.8	6.2	19.3	6.6	4.0	2.6	1.7

**Security Group 5  
PSA Prepayment Assumption Rates**

Distribution Date	Class C					Class IC					Class ZC				
	0%	100%	205%	350%	500%	0%	100%	205%	350%	500%	0%	100%	205%	350%	500%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
February 2020	99	91	84	75	66	99	92	85	77	68	103	103	103	103	103
February 2021	97	82	71	56	43	98	84	73	59	46	107	107	107	107	107
February 2022	96	74	59	41	27	96	76	62	45	31	110	110	110	110	110
February 2023	94	66	49	30	16	95	69	52	34	21	114	114	114	114	114
February 2024	92	59	40	21	8	94	63	44	26	14	118	118	118	118	118
February 2025	90	52	32	14	3	92	56	37	20	10	121	121	121	121	121
February 2026	88	46	26	8	0	90	51	31	15	6	126	126	126	126	114
February 2027	86	40	20	4	0	89	45	26	11	4	130	130	130	130	76
February 2028	84	35	15	1	0	87	40	21	8	3	134	134	134	134	50
February 2029	82	29	11	0	0	85	35	18	6	2	138	138	138	111	33
February 2030	79	24	7	0	0	83	31	14	5	1	143	143	143	81	22
February 2031	76	20	4	0	0	80	27	12	3	1	148	148	148	59	14
February 2032	73	15	1	0	0	78	23	9	2	0	152	152	152	43	9
February 2033	70	11	0	0	0	75	19	7	2	0	158	158	130	30	6
February 2034	67	7	0	0	0	73	16	6	1	0	163	163	100	21	3
February 2035	64	3	0	0	0	70	13	4	1	0	168	168	74	14	2
February 2036	60	0	0	0	0	66	10	3	1	0	174	173	53	9	1
February 2037	56	0	0	0	0	63	7	2	0	0	179	123	35	5	1
February 2038	52	0	0	0	0	59	4	1	0	0	185	77	21	3	0
February 2039	48	0	0	0	0	56	2	0	0	0	191	34	8	1	0
February 2040	43	0	0	0	0	52	0	0	0	0	198	0	0	0	0
February 2041	38	0	0	0	0	47	0	0	0	0	204	0	0	0	0
February 2042	33	0	0	0	0	43	0	0	0	0	211	0	0	0	0
February 2043	27	0	0	0	0	38	0	0	0	0	218	0	0	0	0
February 2044	21	0	0	0	0	32	0	0	0	0	225	0	0	0	0
February 2045	14	0	0	0	0	27	0	0	0	0	233	0	0	0	0
February 2046	8	0	0	0	0	21	0	0	0	0	240	0	0	0	0
February 2047	0	0	0	0	0	14	0	0	0	0	248	0	0	0	0
February 2048	0	0	0	0	0	7	0	0	0	0	130	0	0	0	0
February 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	17.9	7.1	4.7	3.0	2.1	19.6	8.1	5.6	3.7	2.6	29.1	18.8	16.3	12.3	9.2

**Security Group 6  
PSA Prepayment Assumption Rates**

Distribution Date	Class E					Class IE					Class ZE				
	0%	100%	212%	350%	500%	0%	100%	212%	350%	500%	0%	100%	212%	350%	500%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
February 2020	96	90	83	75	67	98	90	84	76	67	103	103	103	103	103
February 2021	92	80	69	56	44	96	81	70	57	45	107	107	107	107	107
February 2022	88	71	56	42	29	94	72	58	43	30	110	110	110	110	110
February 2023	83	62	46	31	19	91	64	47	32	20	114	114	114	114	114
February 2024	78	54	37	22	12	89	56	39	23	13	118	118	118	118	118
February 2025	73	46	29	16	7	86	49	31	17	8	121	121	121	121	121
February 2026	67	39	23	11	4	83	42	25	12	5	126	126	126	126	126
February 2027	61	32	18	7	2	80	36	20	9	3	130	130	130	130	130
February 2028	55	26	13	5	1	77	30	15	6	2	134	134	134	134	134
February 2029	48	20	9	3	0	73	24	11	4	1	138	138	138	138	138
February 2030	41	15	6	1	0	70	19	8	3	1	143	143	143	143	112
February 2031	34	9	3	0	0	66	14	6	2	0	148	148	148	148	56
February 2032	28	5	2	0	0	62	10	4	1	0	152	152	152	127	26
February 2033	25	3	1	0	0	59	6	2	1	0	158	158	158	65	12
February 2034	23	1	0	0	0	57	2	1	0	0	163	163	132	30	5
February 2035	21	0	0	0	0	54	1	0	0	0	168	168	55	11	2
February 2036	19	0	0	0	0	51	0	0	0	0	174	76	21	4	1
February 2037	17	0	0	0	0	48	0	0	0	0	179	29	8	1	0
February 2038	16	0	0	0	0	46	0	0	0	0	185	8	2	0	0
February 2039	15	0	0	0	0	42	0	0	0	0	191	0	0	0	0
February 2040	13	0	0	0	0	39	0	0	0	0	198	0	0	0	0
February 2041	12	0	0	0	0	36	0	0	0	0	204	0	0	0	0
February 2042	11	0	0	0	0	32	0	0	0	0	211	0	0	0	0
February 2043	9	0	0	0	0	29	0	0	0	0	218	0	0	0	0
February 2044	8	0	0	0	0	24	0	0	0	0	225	0	0	0	0
February 2045	6	0	0	0	0	20	0	0	0	0	233	0	0	0	0
February 2046	4	0	0	0	0	16	0	0	0	0	240	0	0	0	0
February 2047	3	0	0	0	0	11	0	0	0	0	248	0	0	0	0
February 2048	1	0	0	0	0	6	0	0	0	0	256	0	0	0	0
February 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	11.0	6.0	4.4	3.2	2.3	16.9	6.4	4.7	3.3	2.4	29.7	17.1	15.8	14.1	12.0

**Security Group 7  
PSA Prepayment Assumption Rates**

Distribution Date	Class EF					Class ES					Class NS				
	0%	150%	327%	500%	700%	0%	150%	327%	500%	700%	0%	150%	327%	500%	700%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
February 2020	99	96	93	90	87	99	96	93	90	87	99	95	91	87	82
February 2021	97	89	79	70	61	97	89	79	70	61	97	87	76	65	54
February 2022	96	79	63	49	35	96	79	63	49	35	96	78	60	45	31
February 2023	95	71	50	34	20	95	71	50	34	20	95	69	47	31	18
February 2024	93	63	39	23	11	93	63	39	23	11	93	62	37	21	10
February 2025	91	56	31	16	6	91	56	31	16	6	91	55	29	15	6
February 2026	90	50	24	11	4	90	50	24	11	4	90	49	23	10	3
February 2027	88	44	19	7	2	88	45	19	7	2	88	43	18	7	2
February 2028	86	39	15	5	1	86	40	15	5	1	86	38	14	5	1
February 2029	84	35	12	3	1	84	35	12	3	1	84	34	11	3	1
February 2030	81	31	9	2	0	81	31	9	2	0	81	30	9	2	0
February 2031	79	27	7	2	0	79	27	7	2	0	79	26	7	1	0
February 2032	77	24	5	1	0	77	24	5	1	0	77	23	5	1	0
February 2033	74	21	4	1	0	74	21	4	1	0	74	20	4	1	0
February 2034	71	18	3	0	0	71	18	3	0	0	71	18	3	0	0
February 2035	68	16	2	0	0	68	16	2	0	0	68	15	2	0	0
February 2036	65	14	2	0	0	65	14	2	0	0	65	13	2	0	0
February 2037	61	12	1	0	0	61	12	1	0	0	61	11	1	0	0
February 2038	58	10	1	0	0	58	10	1	0	0	58	10	1	0	0
February 2039	54	8	1	0	0	54	8	1	0	0	54	8	1	0	0
February 2040	50	7	1	0	0	50	7	1	0	0	50	7	1	0	0
February 2041	46	6	0	0	0	46	6	0	0	0	46	5	0	0	0
February 2042	41	5	0	0	0	41	5	0	0	0	41	4	0	0	0
February 2043	36	4	0	0	0	36	4	0	0	0	36	3	0	0	0
February 2044	31	3	0	0	0	31	3	0	0	0	31	3	0	0	0
February 2045	26	2	0	0	0	26	2	0	0	0	26	2	0	0	0
February 2046	20	1	0	0	0	20	1	0	0	0	20	1	0	0	0
February 2047	14	1	0	0	0	14	1	0	0	0	14	1	0	0	0
February 2048	7	0	0	0	0	7	0	0	0	0	7	0	0	0	0
February 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	19.3	8.8	5.1	3.7	2.8	19.3	8.8	5.1	3.7	2.8	19.3	8.6	4.9	3.5	2.6

**Security Group 7  
PSA Prepayment Assumption Rates**

Distribution Date	Class SE					Class SF				
	0%	150%	327%	500%	700%	0%	150%	327%	500%	700%
Initial Percent	100	100	100	100	100	100	100	100	100	100
February 2020	99	96	94	91	88	99	96	94	91	88
February 2021	97	89	80	72	63	97	89	80	72	63
February 2022	96	80	64	50	37	96	80	64	50	37
February 2023	95	71	50	34	21	95	71	50	34	21
February 2024	93	64	40	24	12	93	64	40	24	12
February 2025	91	57	31	16	7	91	57	31	16	7
February 2026	90	50	25	11	4	90	51	25	11	4
February 2027	88	45	19	8	2	88	45	19	8	2
February 2028	86	40	15	5	1	86	40	15	5	1
February 2029	84	35	12	4	1	84	35	12	4	1
February 2030	81	31	9	2	0	81	31	9	2	0
February 2031	79	27	7	2	0	79	27	7	2	0
February 2032	77	24	6	1	0	77	24	6	1	0
February 2033	74	21	4	1	0	74	21	4	1	0
February 2034	71	18	3	0	0	71	18	3	0	0
February 2035	68	16	3	0	0	68	16	3	0	0
February 2036	65	14	2	0	0	65	14	2	0	0
February 2037	61	12	1	0	0	61	12	1	0	0
February 2038	58	10	1	0	0	58	10	1	0	0
February 2039	54	8	1	0	0	54	8	1	0	0
February 2040	50	7	1	0	0	50	7	1	0	0
February 2041	46	6	0	0	0	46	6	0	0	0
February 2042	41	5	0	0	0	41	5	0	0	0
February 2043	36	4	0	0	0	36	4	0	0	0
February 2044	31	3	0	0	0	31	3	0	0	0
February 2045	26	2	0	0	0	26	2	0	0	0
February 2046	20	1	0	0	0	20	1	0	0	0
February 2047	14	1	0	0	0	14	1	0	0	0
February 2048	7	0	0	0	0	7	0	0	0	0
February 2049	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	19.3	8.9	5.2	3.7	2.9	19.3	8.9	5.2	3.7	2.9

**Security Group 8  
PSA Prepayment Assumption Rates**

Distribution Date	Class AL					Class FA					Class G					Class SB					
	0%	150%	290%	450%	600%	0%	150%	290%	450%	600%	0%	150%	290%	450%	600%	0%	150%	290%	450%	600%	
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
February 2020	100	100	100	100	100	99	96	94	92	89	98	94	91	87	84	99	96	94	92	90	88
February 2021	100	100	100	100	100	98	89	82	74	67	96	83	72	60	49	98	89	82	75	68	63
February 2022	100	100	100	100	100	96	80	67	54	43	94	69	49	28	11	96	80	67	54	43	37
February 2023	100	100	100	100	76	95	72	55	39	27	92	56	29	5	0	95	72	55	39	27	21
February 2024	100	100	100	78	48	94	64	44	28	17	90	44	13	0	0	94	64	44	28	17	12
February 2025	100	100	100	56	30	92	57	36	20	11	88	34	0	0	0	92	57	36	20	11	7
February 2026	100	100	81	40	19	90	51	29	14	7	85	24	0	0	0	90	51	29	14	7	4
February 2027	100	100	66	28	12	89	45	23	10	4	82	15	0	0	0	89	45	23	10	4	2
February 2028	100	100	53	20	7	87	40	19	7	3	79	7	0	0	0	87	40	19	7	3	1
February 2029	100	100	43	14	5	85	36	15	5	2	76	0	0	0	0	85	36	15	5	2	0
February 2030	100	88	34	10	3	83	31	12	4	1	73	0	0	0	0	83	32	12	4	1	0
February 2031	100	78	27	7	2	80	28	10	3	1	70	0	0	0	0	80	28	10	3	1	0
February 2032	100	69	22	5	1	78	24	8	2	0	66	0	0	0	0	78	24	8	2	0	0
February 2033	100	60	17	4	1	75	21	6	1	0	62	0	0	0	0	75	21	6	1	0	0
February 2034	100	52	14	3	0	73	19	5	1	0	57	0	0	0	0	73	19	5	1	0	0
February 2035	100	46	11	2	0	70	16	4	1	0	53	0	0	0	0	70	16	4	1	0	0
February 2036	100	39	8	1	0	66	14	3	0	0	48	0	0	0	0	66	14	3	0	0	0
February 2037	100	34	7	1	0	63	12	2	0	0	43	0	0	0	0	63	12	2	0	0	0
February 2038	100	29	5	1	0	59	10	2	0	0	37	0	0	0	0	59	10	2	0	0	0
February 2039	100	24	4	0	0	56	9	1	0	0	31	0	0	0	0	56	9	1	0	0	0
February 2040	100	20	3	0	0	52	7	1	0	0	25	0	0	0	0	52	7	1	0	0	0
February 2041	100	17	2	0	0	47	6	1	0	0	18	0	0	0	0	47	6	1	0	0	0
February 2042	100	14	2	0	0	43	5	1	0	0	11	0	0	0	0	43	5	1	0	0	0
February 2043	100	11	1	0	0	38	4	0	0	0	3	0	0	0	0	38	4	0	0	0	0
February 2044	91	8	1	0	0	32	3	0	0	0	0	0	0	0	0	32	3	0	0	0	0
February 2045	75	6	1	0	0	27	2	0	0	0	0	0	0	0	0	27	2	0	0	0	0
February 2046	58	4	0	0	0	21	2	0	0	0	0	0	0	0	0	21	2	0	0	0	0
February 2047	40	3	0	0	0	14	1	0	0	0	0	0	0	0	0	14	1	0	0	0	0
February 2048	21	1	0	0	0	7	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0
February 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	27.4	16.5	10.5	7.2	5.6	19.6	9.0	5.7	4.1	3.2	15.3	4.8	3.1	2.3	1.9	19.6	9.0	5.7	4.1	3.2	2.9

**Security Group 8  
PSA Prepayment Assumption Rates**

Distribution Date	Class SC					Class SD					Class VA					Class VZ				
	0%	150%	290%	450%	600%	0%	150%	290%	450%	600%	0%	150%	290%	450%	600%	0%	150%	290%	450%	600%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
February 2020	99	96	94	92	90	99	96	94	91	88	92	92	92	92	92	103	103	103	103	103
February 2021	98	89	82	75	68	98	89	81	73	66	85	85	85	85	85	106	106	106	106	106
February 2022	96	80	67	54	43	96	80	66	53	42	77	77	77	77	77	109	109	109	109	109
February 2023	95	72	55	39	27	95	71	54	38	26	68	68	68	68	0	113	113	113	113	107
February 2024	94	64	44	28	17	94	64	44	27	16	60	60	60	0	0	116	116	116	109	67
February 2025	92	57	36	20	11	92	57	35	19	10	51	51	51	0	0	120	120	120	78	42
February 2026	90	51	29	14	7	90	51	29	14	6	42	42	0	0	0	123	123	114	56	26
February 2027	89	45	23	10	4	89	45	23	10	4	33	33	0	0	0	127	127	92	40	16
February 2028	87	40	19	7	3	87	40	19	7	3	23	23	0	0	0	131	131	74	28	10
February 2029	85	36	15	5	2	85	35	15	5	2	13	13	0	0	0	135	135	60	20	6
February 2030	83	32	12	4	1	83	31	12	4	1	3	0	0	0	0	139	124	48	14	4
February 2031	80	28	10	3	1	80	28	10	3	1	0	0	0	0	0	140	109	38	10	2
February 2032	78	24	8	2	0	78	24	8	2	0	0	0	0	0	0	140	96	31	7	2
February 2033	75	21	6	1	0	75	21	6	1	0	0	0	0	0	0	140	84	24	5	1
February 2034	73	19	5	1	0	73	18	5	1	0	0	0	0	0	0	140	74	19	4	1
February 2035	70	16	4	1	0	70	16	4	1	0	0	0	0	0	0	140	64	15	2	0
February 2036	66	14	3	0	0	66	14	3	0	0	0	0	0	0	0	140	55	12	2	0
February 2037	63	12	2	0	0	63	12	2	0	0	0	0	0	0	0	140	47	9	1	0
February 2038	59	10	2	0	0	59	10	2	0	0	0	0	0	0	0	140	41	7	1	0
February 2039	56	9	1	0	0	56	9	1	0	0	0	0	0	0	0	140	34	6	1	0
February 2040	52	7	1	0	0	52	7	1	0	0	0	0	0	0	0	140	29	4	0	0
February 2041	47	6	1	0	0	47	6	1	0	0	0	0	0	0	0	140	24	3	0	0
February 2042	43	5	1	0	0	43	5	1	0	0	0	0	0	0	0	140	19	2	0	0
February 2043	38	4	0	0	0	38	4	0	0	0	0	0	0	0	0	140	15	2	0	0
February 2044	32	3	0	0	0	32	3	0	0	0	0	0	0	0	0	127	12	1	0	0
February 2045	27	2	0	0	0	27	2	0	0	0	0	0	0	0	0	105	9	1	0	0
February 2046	21	2	0	0	0	21	2	0	0	0	0	0	0	0	0	81	6	0	0	0
February 2047	14	1	0	0	0	14	1	0	0	0	0	0	0	0	0	56	4	0	0	0
February 2048	7	0	0	0	0	7	0	0	0	0	0	0	0	0	0	29	2	0	0	0
February 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average																				
Life (years)	19.6	9.0	5.7	4.1	3.2	19.6	8.9	5.7	4.0	3.2	6.0	5.9	4.8	3.8	3.1	27.4	16.8	11.1	7.8	6.0

**Security Group 9  
PSA Prepayment Assumption Rates**

Distribution Date	Class M				Class ZM					
	0%	100%	175%	300%	400%	0%	100%	175%	300%	400%
Initial Percent	100	100	100	100	100	100	100	100	100	100
February 2020	98	91	87	79	73	104	104	104	104	104
February 2021	97	84	75	63	53	107	107	107	107	107
February 2022	95	76	65	49	38	111	111	111	111	111
February 2023	93	69	56	38	27	115	115	115	115	115
February 2024	91	63	48	29	19	119	119	119	119	119
February 2025	89	56	41	22	12	123	123	123	123	123
February 2026	86	51	35	16	8	128	128	128	128	128
February 2027	84	45	29	12	4	132	132	132	132	132
February 2028	82	40	24	8	1	137	137	137	137	137
February 2029	79	36	20	5	0	142	142	142	142	125
February 2030	76	31	16	2	0	147	147	147	147	91
February 2031	73	27	12	0	0	152	152	152	152	66
February 2032	70	23	9	0	0	158	158	158	127	47
February 2033	67	20	7	0	0	163	163	163	98	34
February 2034	64	16	4	0	0	169	169	169	76	24
February 2035	60	13	2	0	0	175	175	175	58	17
February 2036	57	10	0	0	0	181	181	181	44	12
February 2037	53	8	0	0	0	188	188	158	33	8
February 2038	49	5	0	0	0	194	194	127	24	6
February 2039	45	3	0	0	0	201	201	100	17	4
February 2040	40	0	0	0	0	208	208	78	12	3
February 2041	36	0	0	0	0	216	171	58	8	2
February 2042	31	0	0	0	0	223	128	42	6	1
February 2043	25	0	0	0	0	231	89	27	3	1
February 2044	20	0	0	0	0	240	52	15	2	0
February 2045	14	0	0	0	0	248	18	5	1	0
February 2046	8	0	0	0	0	257	0	0	0	0
February 2047	2	0	0	0	0	266	0	0	0	0
February 2048	0	0	0	0	0	165	0	0	0	0
February 2049	0	0	0	0	0	0	0	0	0	0
Weighted Average										
Life (years)	17.4	8.2	5.8	3.7	2.8	29.2	23.7	20.9	15.8	12.7

**Security Group 10  
PSA Prepayment Assumption Rates**

Distribution Date	Class AB					Class FC					Class SA					Class SG				
	0%	100%	243%	350%	500%	0%	100%	243%	350%	500%	0%	100%	243%	350%	500%	0%	100%	243%	350%	500%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
February 2020	99	90	82	76	67	99	90	82	75	67	99	90	82	76	67	99	90	81	75	67
February 2021	98	80	66	57	45	98	80	66	57	44	98	81	67	57	45	98	80	66	56	44
February 2022	97	72	54	42	30	97	71	53	42	29	97	72	54	43	30	97	71	53	42	29
February 2023	96	63	43	32	19	96	63	43	31	19	95	64	43	32	20	96	62	42	31	19
February 2024	94	55	34	23	13	94	55	34	23	13	94	56	35	24	13	95	54	33	23	12
February 2025	93	48	27	17	8	93	47	27	17	8	93	49	27	17	8	93	46	26	16	8
February 2026	91	41	21	12	5	92	40	21	12	5	91	42	21	12	5	92	39	20	11	5
February 2027	90	34	16	9	3	90	34	16	8	3	89	36	17	9	3	90	32	15	8	3
February 2028	88	28	12	6	2	88	27	12	6	2	88	30	13	6	2	89	26	11	5	2
February 2029	86	22	9	4	1	86	21	8	4	1	86	24	9	4	1	87	19	7	3	1
February 2030	84	17	6	3	1	84	16	6	2	1	84	19	7	3	1	85	14	5	2	1
February 2031	82	12	4	1	0	82	11	3	1	0	82	14	4	2	0	83	8	3	1	0
February 2032	80	7	2	1	0	80	6	2	1	0	79	9	3	1	0	80	3	1	0	0
February 2033	77	3	1	0	0	77	2	1	0	0	77	5	1	0	0	78	0	0	0	0
February 2034	74	0	0	0	0	75	0	0	0	0	74	1	0	0	0	75	0	0	0	0
February 2035	72	0	0	0	0	72	0	0	0	0	71	0	0	0	0	73	0	0	0	0
February 2036	69	0	0	0	0	69	0	0	0	0	68	0	0	0	0	70	0	0	0	0
February 2037	65	0	0	0	0	66	0	0	0	0	65	0	0	0	0	66	0	0	0	0
February 2038	62	0	0	0	0	62	0	0	0	0	61	0	0	0	0	63	0	0	0	0
February 2039	58	0	0	0	0	58	0	0	0	0	57	0	0	0	0	59	0	0	0	0
February 2040	54	0	0	0	0	54	0	0	0	0	53	0	0	0	0	55	0	0	0	0
February 2041	49	0	0	0	0	50	0	0	0	0	49	0	0	0	0	50	0	0	0	0
February 2042	45	0	0	0	0	45	0	0	0	0	44	0	0	0	0	46	0	0	0	0
February 2043	40	0	0	0	0	40	0	0	0	0	39	0	0	0	0	40	0	0	0	0
February 2044	34	0	0	0	0	34	0	0	0	0	34	0	0	0	0	35	0	0	0	0
February 2045	28	0	0	0	0	28	0	0	0	0	28	0	0	0	0	29	0	0	0	0
February 2046	22	0	0	0	0	22	0	0	0	0	22	0	0	0	0	22	0	0	0	0
February 2047	15	0	0	0	0	15	0	0	0	0	15	0	0	0	0	16	0	0	0	0
February 2048	8	0	0	0	0	8	0	0	0	0	8	0	0	0	0	8	0	0	0	0
February 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average																				
Life (years)	20.0	6.2	4.3	3.3	2.4	20.1	6.1	4.2	3.3	2.4	19.9	6.4	4.3	3.3	2.4	20.2	5.9	4.1	3.2	2.4

**Security Group 11  
PSA Prepayment Assumption Rates**

Distribution Date	Class IJ			
	0%	150%	315%	700%
Initial Percent	100	100	100	100
February 2020	97	88	79	68
February 2021	94	78	62	46
February 2022	90	68	48	31
February 2023	87	60	38	21
February 2024	83	52	29	14
February 2025	79	45	23	9
February 2026	75	39	17	6
February 2027	71	33	13	4
February 2028	67	28	10	3
February 2029	62	24	8	2
February 2030	57	20	6	1
February 2031	52	17	4	1
February 2032	46	14	3	0
February 2033	41	11	2	0
February 2034	35	8	1	0
February 2035	28	6	1	0
February 2036	22	4	1	0
February 2037	15	3	0	0
February 2038	8	1	0	0
February 2039	2	0	0	0
February 2040	1	0	0	0
February 2041	0	0	0	0
February 2042	0	0	0	0
February 2043	0	0	0	0
February 2044	0	0	0	0
February 2045	0	0	0	0
February 2046	0	0	0	0
February 2047	0	0	0	0
February 2048	0	0	0	0
February 2049	0	0	0	0
Weighted Average				
Life (years)	11.7	6.5	3.9	2.5



**Security Groups 4 and 11  
PSA Prepayment Assumption Rates**

Distribution Date	Class IM				
	0%	150%	315%	500%	700%
Initial Percent	100	100	100	100	100
February 2020	98	88	79	68	56
February 2021	96	78	62	46	32
February 2022	94	68	48	31	18
February 2023	92	60	38	21	10
February 2024	89	52	29	14	6
February 2025	87	45	23	9	3
February 2026	84	39	18	6	2
February 2027	81	34	13	4	1
February 2028	78	29	10	3	1
February 2029	75	25	8	2	0
February 2030	72	21	6	1	0
February 2031	68	17	4	1	0
February 2032	65	14	3	0	0
February 2033	61	11	2	0	0
February 2034	57	9	2	0	0
February 2035	53	7	1	0	0
February 2036	48	5	1	0	0
February 2037	44	3	0	0	0
February 2038	39	2	0	0	0
February 2039	34	1	0	0	0
February 2040	31	0	0	0	0
February 2041	28	0	0	0	0
February 2042	25	0	0	0	0
February 2043	22	0	0	0	0
February 2044	19	0	0	0	0
February 2045	16	0	0	0	0
February 2046	12	0	0	0	0
February 2047	8	0	0	0	0
February 2048	4	0	0	0	0
February 2049	0	0	0	0	0
Weighted Average Life (years)	16.3	6.6	4.0	2.6	1.7

**Security Group 12  
PSA Prepayment Assumption Rates**

Distribution Date	Class IK				
	0%	150%	315%	500%	700%
Initial Percent	100	100	100	100	100
February 2020	97	88	79	68	56
February 2021	94	78	62	46	32
February 2022	90	68	48	31	18
February 2023	87	59	37	21	10
February 2024	83	52	29	14	5
February 2025	79	45	22	9	3
February 2026	74	38	17	6	2
February 2027	70	33	13	4	1
February 2028	65	28	10	3	0
February 2029	60	23	7	2	0
February 2030	54	19	5	1	0
February 2031	48	16	4	1	0
February 2032	42	12	3	0	0
February 2033	35	9	2	0	0
February 2034	28	7	1	0	0
February 2035	21	5	1	0	0
February 2036	13	3	0	0	0
February 2037	6	1	0	0	0
February 2038	0	0	0	0	0
February 2039	0	0	0	0	0
February 2040	0	0	0	0	0
February 2041	0	0	0	0	0
February 2042	0	0	0	0	0
February 2043	0	0	0	0	0
February 2044	0	0	0	0	0
February 2045	0	0	0	0	0
February 2046	0	0	0	0	0
February 2047	0	0	0	0	0
Weighted Average Life (years)	11.0	6.3	3.9	2.5	1.7

**Security Groups 1, 3 and 12  
PSA Prepayment Assumption Rates**

Distribution Date	Class AI				
	0%	150%	315%	500%	700%
Initial Percent	100	100	100	100	100
February 2020	99	88	79	68	56
February 2021	97	77	62	46	31
February 2022	96	68	48	31	18
February 2023	94	59	37	21	10
February 2024	93	51	29	14	5
February 2025	91	44	22	9	3
February 2026	89	38	17	6	2
February 2027	87	32	13	4	1
February 2028	85	27	10	3	0
February 2029	82	23	7	2	0
February 2030	80	19	5	1	0
February 2031	77	15	4	1	0
February 2032	74	12	3	0	0
February 2033	71	9	2	0	0
February 2034	68	6	1	0	0
February 2035	64	4	1	0	0
February 2036	61	2	0	0	0
February 2037	57	0	0	0	0
February 2038	53	0	0	0	0
February 2039	50	0	0	0	0
February 2040	46	0	0	0	0
February 2041	42	0	0	0	0
February 2042	38	0	0	0	0
February 2043	34	0	0	0	0
February 2044	29	0	0	0	0
February 2045	24	0	0	0	0
February 2046	19	0	0	0	0
February 2047	13	0	0	0	0
February 2048	7	0	0	0	0
February 2049	0	0	0	0	0
Weighted Average Life (years)	18.7	6.3	3.9	2.5	1.7

**Security Group 13  
PSA Prepayment Assumption Rates**

Distribution Date	Class AN					Class BA					Class CZ					Classes FH and SH				
	0%	225%	290%	349%	600%	0%	225%	290%	349%	600%	0%	225%	290%	349%	600%	0%	225%	290%	349%	600%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
February 2020	99	94	93	92	87	98	92	92	92	91	104	104	96	88	55	99	95	94	93	89
February 2021	97	82	77	74	58	95	78	77	76	67	109	109	82	57	0	98	85	82	79	66
February 2022	95	66	58	52	27	93	59	58	57	33	114	114	66	25	0	96	73	67	61	42
February 2023	94	51	42	34	6	90	43	41	40	10	118	118	57	7	0	95	62	54	48	27
February 2024	92	39	28	20	0	87	29	27	25	0	124	124	55	1	0	94	52	44	37	17
February 2025	90	29	18	9	0	84	17	15	13	0	129	127	55	1	0	92	44	36	29	10
February 2026	88	20	9	0	0	81	8	6	4	0	135	124	53	1	0	90	38	29	22	7
February 2027	85	13	2	0	0	78	2	0	0	0	140	118	49	1	0	89	32	23	17	4
February 2028	83	6	0	0	0	74	1	0	0	0	146	110	44	1	0	87	27	19	13	3
February 2029	80	1	0	0	0	71	0	0	0	0	153	100	40	1	0	85	23	15	10	2
February 2030	78	0	0	0	0	67	0	0	0	0	159	90	35	1	0	83	19	12	8	1
February 2031	75	0	0	0	0	62	0	0	0	0	166	80	30	1	0	80	16	10	6	1
February 2032	72	0	0	0	0	58	0	0	0	0	174	71	26	1	0	78	13	8	5	0
February 2033	68	0	0	0	0	53	0	0	0	0	181	62	22	1	0	75	11	6	3	0
February 2034	65	0	0	0	0	48	0	0	0	0	189	53	19	1	0	73	9	5	3	0
February 2035	61	0	0	0	0	42	0	0	0	0	197	46	16	1	0	70	8	4	2	0
February 2036	57	0	0	0	0	37	0	0	0	0	206	39	13	1	0	66	6	3	1	0
February 2037	53	0	0	0	0	31	0	0	0	0	215	33	11	1	0	63	5	2	1	0
February 2038	48	0	0	0	0	24	0	0	0	0	224	28	9	1	0	59	4	2	1	0
February 2039	43	0	0	0	0	17	0	0	0	0	234	23	8	1	0	56	3	1	1	0
February 2040	38	0	0	0	0	10	0	0	0	0	244	19	6	2	0	52	3	1	0	0
February 2041	32	0	0	0	0	6	0	0	0	0	254	16	5	2	0	47	2	1	0	0
February 2042	26	0	0	0	0	5	0	0	0	0	265	13	5	2	0	43	2	1	0	0
February 2043	20	0	0	0	0	4	0	0	0	0	277	10	3	1	0	38	1	0	0	0
February 2044	13	0	0	0	0	2	0	0	0	0	258	7	2	1	0	32	1	0	0	0
February 2045	6	0	0	0	0	1	0	0	0	0	213	5	2	1	0	27	1	0	0	0
February 2046	0	0	0	0	0	0	0	0	0	0	165	3	1	0	0	21	0	0	0	0
February 2047	0	0	0	0	0	0	0	0	0	0	113	2	1	0	0	14	0	0	0	0
February 2048	0	0	0	0	0	0	0	0	0	0	59	1	0	0	0	7	0	0	0	0
February 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	17.1	4.5	3.8	3.3	2.3	13.7	3.8	3.7	3.6	2.5	27.4	14.8	8.6	2.7	1.0	19.6	6.9	5.7	4.9	3.2

**Security Group 13  
PSA Prepayment Assumption Rates**

Distribution Date	Classes FN and SN					Classes PF and PS					Class PH					Class VH				
	0%	225%	290%	349%	600%	0%	225%	290%	349%	600%	0%	225%	290%	349%	600%	0%	225%	290%	349%	600%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
February 2020	99	95	94	93	90	98	94	94	94	94	98	92	92	92	92	92	92	92	92	92
February 2021	98	86	82	79	68	96	82	82	82	76	95	77	77	77	69	85	85	85	85	85
February 2022	96	73	67	62	43	94	67	67	67	48	92	58	58	58	34	77	77	77	77	77
February 2023	95	62	55	48	27	92	54	54	54	30	89	41	41	41	11	68	68	68	68	68
February 2024	94	53	44	38	17	89	42	42	42	19	86	27	27	27	0	60	60	60	60	22
February 2025	92	45	36	29	11	87	33	33	33	12	83	14	14	14	0	51	51	51	51	0
February 2026	90	38	29	23	7	84	25	25	25	7	80	5	5	5	0	42	42	42	42	0
February 2027	89	32	23	17	4	81	20	20	20	5	76	0	0	0	0	33	3	3	3	0
February 2028	87	27	19	13	3	78	15	15	15	3	72	0	0	0	0	23	0	0	0	0
February 2029	85	23	15	10	2	75	12	12	12	2	68	0	0	0	0	13	0	0	0	0
February 2030	83	19	12	8	1	72	9	9	9	1	64	0	0	0	0	3	0	0	0	0
February 2031	80	16	10	6	1	68	7	7	7	1	59	0	0	0	0	0	0	0	0	0
February 2032	78	13	8	5	0	64	5	5	5	0	55	0	0	0	0	0	0	0	0	0
February 2033	75	11	6	4	0	60	4	4	4	0	49	0	0	0	0	0	0	0	0	0
February 2034	73	9	5	3	0	56	3	3	3	0	44	0	0	0	0	0	0	0	0	0
February 2035	70	8	4	2	0	51	2	2	2	0	38	0	0	0	0	0	0	0	0	0
February 2036	66	6	3	2	0	47	2	2	2	0	32	0	0	0	0	0	0	0	0	0
February 2037	63	5	2	1	0	41	1	1	1	0	26	0	0	0	0	0	0	0	0	0
February 2038	59	4	2	1	0	36	1	1	1	0	19	0	0	0	0	0	0	0	0	0
February 2039	56	3	1	1	0	30	0	0	0	0	11	0	0	0	0	0	0	0	0	0
February 2040	52	3	1	0	0	24	0	0	0	0	4	0	0	0	0	0	0	0	0	0
February 2041	47	2	1	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February 2042	43	2	1	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February 2043	38	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February 2044	32	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February 2045	27	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February 2046	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February 2047	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February 2048	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	19.6	6.9	5.7	5.0	3.2	15.1	5.3	5.3	5.3	3.5	12.9	3.6	3.6	3.6	2.6	6.0	5.4	5.4	5.4	4.0

**PSA Prepayment Assumption Rates**

Distribution Date	Class VN					Class ZH					Class ZN				
	0%	225%	290%	349%	600%	0%	225%	290%	349%	600%	0%	225%	290%	349%	600%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
February 2020	92	92	92	92	92	103	103	103	103	103	103	103	103	103	103
February 2021	85	85	85	85	85	106	106	106	106	106	106	106	106	106	106
February 2022	77	77	77	77	77	109	109	109	109	109	109	109	109	109	109
February 2023	68	68	68	68	68	113	113	113	113	113	113	113	113	113	113
February 2024	60	60	60	60	0	116	116	116	116	116	116	116	116	116	108
February 2025	51	51	51	51	0	120	120	120	120	79	120	120	120	120	68
February 2026	42	42	42	42	0	123	123	123	123	49	123	123	123	123	42
February 2027	33	33	33	0	0	127	127	127	127	31	127	127	127	110	27
February 2028	23	23	0	0	0	131	99	99	99	19	131	131	119	85	17
February 2029	13	13	0	0	0	135	76	76	76	12	135	135	96	65	10
February 2030	3	0	0	0	0	139	58	58	58	7	139	121	77	50	6
February 2031	0	0	0	0	0	140	44	44	44	5	140	101	62	38	4
February 2032	0	0	0	0	0	140	33	33	33	3	140	85	49	29	2
February 2033	0	0	0	0	0	140	25	25	25	2	140	70	39	22	2
February 2034	0	0	0	0	0	140	19	19	19	1	140	58	31	17	1
February 2035	0	0	0	0	0	140	14	14	14	1	140	48	24	13	1
February 2036	0	0	0	0	0	140	10	10	10	0	140	40	19	10	0
February 2037	0	0	0	0	0	140	7	7	7	0	140	32	15	7	0
February 2038	0	0	0	0	0	140	5	5	5	0	140	26	12	5	0
February 2039	0	0	0	0	0	140	3	3	3	0	140	21	9	4	0
February 2040	0	0	0	0	0	140	2	2	2	0	140	17	7	3	0
February 2041	0	0	0	0	0	116	1	1	1	0	140	13	5	2	0
February 2042	0	0	0	0	0	71	0	0	0	0	140	10	4	1	0
February 2043	0	0	0	0	0	22	0	0	0	0	140	8	3	1	0
February 2044	0	0	0	0	0	0	0	0	0	0	140	6	2	1	0
February 2045	0	0	0	0	0	0	0	0	0	0	140	4	1	0	0
February 2046	0	0	0	0	0	0	0	0	0	0	130	3	1	0	0
February 2047	0	0	0	0	0	0	0	0	0	0	90	2	0	0	0
February 2048	0	0	0	0	0	0	0	0	0	0	46	1	0	0	0
February 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	6.0	5.9	5.6	5.2	3.8	23.0	11.6	11.6	11.6	7.3	28.4	15.4	13.0	11.2	7.0

**Security Groups 8 and 13  
PSA Prepayment Assumption Rates**

Distribution Date	Class FE							Class FG						
	0%	150%	225%	290%	349%	450%	600%	0%	150%	225%	290%	349%	450%	600%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100
February 2020	99	96	95	94	93	92	90	99	96	95	94	93	92	89
February 2021	97	89	85	82	80	76	69	98	89	85	82	79	74	67
February 2022	96	79	72	67	63	55	44	96	80	73	67	62	54	43
February 2023	94	70	60	54	49	40	28	95	72	62	54	48	38	27
February 2024	93	62	51	44	38	28	17	94	64	53	44	37	28	17
February 2025	91	55	42	35	30	20	11	92	57	45	36	29	20	11
February 2026	89	48	35	28	23	14	7	90	51	38	29	22	14	7
February 2027	87	42	29	23	18	10	4	89	45	32	23	17	10	4
February 2028	85	37	25	18	14	7	3	87	40	27	19	13	7	3
February 2029	83	32	20	14	11	5	2	85	36	23	15	10	5	2
February 2030	80	28	17	11	8	4	1	83	31	19	12	8	4	1
February 2031	78	24	14	9	6	3	1	80	28	16	10	6	3	1
February 2032	75	20	12	7	5	2	0	78	24	13	8	5	2	0
February 2033	72	18	10	6	4	1	0	75	21	11	6	4	1	0
February 2034	69	15	8	4	3	1	0	73	19	9	5	3	1	0
February 2035	66	13	6	3	2	1	0	70	16	8	4	2	1	0
February 2036	62	11	5	3	2	0	0	66	14	6	3	2	0	0
February 2037	59	10	4	2	1	0	0	63	12	5	2	1	0	0
February 2038	55	8	3	2	1	0	0	59	10	4	2	1	0	0
February 2039	50	7	3	1	1	0	0	56	9	3	1	1	0	0
February 2040	46	6	2	1	0	0	0	52	7	3	1	0	0	0
February 2041	41	5	2	1	0	0	0	47	6	2	1	0	0	0
February 2042	36	4	1	0	0	0	0	43	5	2	1	0	0	0
February 2043	31	3	1	0	0	0	0	38	4	1	0	0	0	0
February 2044	26	2	1	0	0	0	0	32	3	1	0	0	0	0
February 2045	21	2	1	0	0	0	0	27	2	1	0	0	0	0
February 2046	16	1	0	0	0	0	0	21	2	0	0	0	0	0
February 2047	11	1	0	0	0	0	0	14	1	0	0	0	0	0
February 2048	6	0	0	0	0	0	0	7	0	0	0	0	0	0
February 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	18.7	8.4	6.6	5.6	5.0	4.1	3.3	19.6	9.0	6.9	5.7	4.9	4.0	3.2

**PSA Prepayment Assumption Rates**

Distribution Date	Class LA							Class MV						
	0%	150%	225%	290%	349%	450%	600%	0%	150%	225%	290%	349%	450%	600%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100
February 2020	100	100	100	100	100	100	100	92	92	92	92	92	92	92
February 2021	100	100	100	100	100	100	100	85	85	85	85	85	85	85
February 2022	100	100	100	100	100	100	100	77	77	77	77	77	77	77
February 2023	100	100	100	100	100	100	88	68	68	68	68	68	68	35
February 2024	100	100	100	100	100	89	67	60	60	60	60	60	30	9
February 2025	100	100	100	100	91	77	42	51	51	51	51	26	22	0
February 2026	100	100	100	91	82	56	26	42	42	42	21	21	0	0
February 2027	100	100	92	80	69	40	17	33	33	5	5	1	0	0
February 2028	100	100	76	63	53	29	10	23	23	2	0	0	0	0
February 2029	100	95	63	50	41	20	6	13	8	1	0	0	0	0
February 2030	100	78	52	39	31	14	4	3	0	0	0	0	0	0
February 2031	100	63	42	31	24	10	2	0	0	0	0	0	0	0
February 2032	100	53	34	24	18	7	2	0	0	0	0	0	0	0
February 2033	100	46	28	19	14	5	1	0	0	0	0	0	0	0
February 2034	100	40	22	14	10	4	1	0	0	0	0	0	0	0
February 2035	100	34	18	11	8	2	0	0	0	0	0	0	0	0
February 2036	100	29	14	8	6	2	0	0	0	0	0	0	0	0
February 2037	100	24	11	6	4	1	0	0	0	0	0	0	0	0
February 2038	100	20	9	5	3	1	0	0	0	0	0	0	0	0
February 2039	100	17	7	3	2	1	0	0	0	0	0	0	0	0
February 2040	100	14	5	3	1	0	0	0	0	0	0	0	0	0
February 2041	93	11	4	2	1	0	0	0	0	0	0	0	0	0
February 2042	80	9	3	1	0	0	0	0	0	0	0	0	0	0
February 2043	66	7	2	1	0	0	0	0	0	0	0	0	0	0
February 2044	55	6	2	1	0	0	0	0	0	0	0	0	0	0
February 2045	47	4	1	0	0	0	0	0	0	0	0	0	0	0
February 2046	38	3	1	0	0	0	0	0	0	0	0	0	0	0
February 2047	26	2	0	0	0	0	0	0	0	0	0	0	0	0
February 2048	13	1	0	0	0	0	0	0	0	0	0	0	0	0
February 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	25.7	15.1	12.4	11.0	10.1	8.1	6.2	6.0	5.9	5.4	5.1	4.8	4.2	3.6

**Security Groups 8 and 13  
PSA Prepayment Assumption Rates**

Distribution Date	Class MZ						
	0%	150%	225%	290%	349%	450%	600%
Initial Percent	100	100	100	100	100	100	100
February 2020	103	103	103	103	103	103	103
February 2021	106	106	106	106	106	106	106
February 2022	109	109	109	109	109	109	109
February 2023	113	113	113	113	113	113	110
February 2024	116	116	116	116	116	113	91
February 2025	120	120	120	120	117	99	59
February 2026	123	123	123	119	106	79	37
February 2027	127	127	127	110	96	57	23
February 2028	131	131	106	89	75	40	15
February 2029	135	130	89	70	57	29	9
February 2030	139	110	73	55	44	20	6
February 2031	140	89	59	43	34	14	3
February 2032	140	75	48	34	25	10	2
February 2033	140	65	39	26	19	7	1
February 2034	140	56	31	20	14	5	1
February 2035	140	47	25	16	11	3	0
February 2036	140	40	20	12	8	2	0
February 2037	140	34	16	9	6	2	0
February 2038	140	28	13	7	4	1	0
February 2039	140	24	10	5	3	1	0
February 2040	140	20	8	4	2	1	0
February 2041	130	16	6	2	1	0	0
February 2042	112	13	4	2	1	0	0
February 2043	93	10	3	1	0	0	0
February 2044	77	8	2	1	0	0	0
February 2045	66	6	2	1	0	0	0
February 2046	53	4	1	0	0	0	0
February 2047	37	2	1	0	0	0	0
February 2048	19	1	0	0	0	0	0
February 2049	0	0	0	0	0	0	0
Weighted Average Life (years)	25.7	15.3	12.9	11.6	10.7	8.7	6.7

### Yield Considerations

An investor seeking to maximize yield should make a decision whether to invest in any Regular or MX Class based on the anticipated yield of that Class resulting from its purchase price, the investor's own projection of Mortgage Loan prepayment rates under a variety of scenarios, in the case of the Group 6, 11 and 12 Securities, the investor's own projection of payment rates on the Underlying Certificates under a variety of scenarios and, in the case of a Floating Rate or an Inverse Floating Rate Class, the investor's own projection of levels of LIBOR under a variety of scenarios. **No representation is made regarding Mortgage Loan prepayment rates, Underlying Certificate payment rates, LIBOR levels or the yield of any Class.**

#### *Prepayments: Effect on Yields*

The yields to investors will be sensitive in varying degrees to the rate of prepayments on the related Mortgage Loans.

- In the case of Regular Securities or MX Securities purchased at a premium (especially the Interest Only Classes), faster than anticipated rates of principal payments could result in actual yields to investors that are lower than the anticipated yields.
- Investors in the Interest Only Classes should also consider the risk that rapid rates of principal payments could result in the failure of investors to recover fully their investments.
- In the case of Regular Securities or MX Securities purchased at a discount, slower than anticipated rates of principal payments could result in actual yields to investors that are lower than the anticipated yields.

See "Risk Factors — Rates of principal payments can reduce your yield" in this Supplement.

Rapid rates of prepayments on the Mortgage Loans are likely to coincide with periods of low prevailing interest rates.

During periods of low prevailing interest rates, the yields at which an investor may be able to reinvest amounts received as principal payments on the investor's Class of Securities may be lower than the yield on that Class.

Slow rates of prepayments on the Mortgage Loans are likely to coincide with periods of high prevailing interest rates.

During periods of high prevailing interest rates, the amount of principal payments available to an investor for reinvestment at those high rates may be relatively low.

The Mortgage Loans will not prepay at any constant rate until maturity, nor will all of the Mortgage Loans underlying any Trust Asset Group prepay at the same rate at any one time. The timing of changes in the rate of prepayments may affect the actual yield to an investor, even if the average rate of principal prepayments is consistent with the investor's expectation. In general, the earlier a prepayment of principal on the Mortgage Loans, the greater the effect on an investor's yield. As a result, the effect on an investor's yield of principal prepayments occurring at a rate higher (or lower) than the rate anticipated by the investor during the period immediately following the Closing Date is not likely to be offset by a later equivalent reduction (or increase) in the rate of principal prepayments.

*LIBOR: Effect on Yields of the Floating Rate and Inverse Floating Rate Classes*

Low levels of LIBOR can reduce the yield of the Floating Rate Classes. High levels of LIBOR can reduce the yield of the Inverse Floating Rate Classes. In addition, the Floating Rate Classes will not necessarily benefit from a higher yield at high levels of LIBOR because the rate on such Classes is capped at a maximum rate described under "Terms Sheet — Interest Rates."

*Payment Delay: Effect on Yields of the Fixed Rate Classes*

The effective yield on any Fixed Rate Class will be less than the yield otherwise produced by its Interest Rate and purchase price because, on each Distribution Date, 30 days' interest will be payable on (or added to the principal amount of) that Class even though interest began to accrue approximately 50 days earlier.

## **Yield Tables**

The following tables show the pre-tax yields to maturity on a corporate bond equivalent basis of specified Classes at various constant percentages of PSA and, in the case of the Floating Rate and Inverse Floating Rate Classes, at various constant levels of LIBOR.

The Mortgage Loans will not prepay at any constant rate until maturity, and it is unlikely that LIBOR will remain constant. Moreover, it is likely that the Mortgage Loans will experience actual prepayment rates that differ from those of the Modeling Assumptions. **Therefore, the actual pre-tax yield of any Class may differ from those shown in the applicable table below for that Class even if the Class is purchased at the assumed price shown.**

The yields were calculated by

1. determining the monthly discount rates that, when applied to the applicable assumed streams of cash flows to be paid on the applicable Class, would cause the discounted present value of the assumed streams of cash flows to equal the assumed purchase price of that Class plus accrued interest, and

2. converting the monthly rates to corporate bond equivalent rates.

These calculations do not take into account variations that may occur in the interest rates at which investors may be able to reinvest funds received by them as distributions on their Securities and consequently do not purport to reflect the return on any investment in any Class when those reinvestment rates are considered.

The information set forth in the following tables was prepared on the basis of the Modeling Assumptions and the assumptions that (1) the Interest Rate applicable to each Floating Rate and Inverse Floating Rate Class for each Accrual Period following the first Accrual Period will be based on the indicated level of LIBOR and (2) the purchase price of each Class (expressed as a percentage of its original Class Notional Balance) plus accrued interest is as indicated in the related table. **The assumed purchase price is not necessarily that at which actual sales will occur.**

### SECURITY GROUP 1

#### Sensitivity of Class IO to Prepayments Assumed Price 19.75%\*

PSA Prepayment Assumption Rates				
150%	315%	339%	500%	700%
13.5%	1.8%	0.0%	(12.3)%	(28.9)%

### SECURITY GROUP 2

#### Sensitivity of Class JS to Prepayments Assumed Price 17.048525%\*

LIBOR	PSA Prepayment Assumption Rates			
	150%	315%	500%	700%
1.0000% .....	20.4%	10.9%	(0.3)%	(13.0)%
2.5126% .....	10.4%	0.6%	(10.8)%	(23.9)%
4.2563% .....	(1.8)%	(11.6)%	(23.4)%	(37.0)%
6.0000% and above .....	**	**	**	**

#### Sensitivity of Class KI to Prepayments Assumed Price 0.03125%\*

LIBOR	PSA Prepayment Assumption Rates			
	150%	315%	500%	700%
5.50% and below .....	**	**	**	**
5.75% .....	2,103.5%	2,074.6%	2,041.5%	2,004.9%
6.00% and above .....	8,397.6%	8,306.5%	8,202.4%	8,087.4%

\* The price does not include accrued interest. Accrued interest has been added to the price in calculating the yields set forth in the table.

\*\* Indicates that investors will suffer a loss of virtually all of their investment.

**SECURITY GROUP 3**

**Sensitivity of Class ID to Prepayments  
Assumed Price 19.0%\***

<b>PSA Prepayment Assumption Rates</b>				
<u>150%</u>	<u>315%</u>	<u>357%</u>	<u>500%</u>	<u>700%</u>
15.0%	3.2%	0.1%	(11.0)%	(27.7)%

**SECURITY GROUP 4**

**Sensitivity of Class IB to Prepayments  
Assumed Price 19.625%\***

<b>PSA Prepayment Assumption Rates</b>				
<u>150%</u>	<u>278%</u>	<u>315%</u>	<u>500%</u>	<u>700%</u>
8.9%	0.1%	(2.6)%	(16.4)%	(32.7)%

**SECURITY GROUP 5**

**Sensitivity of Class IC to Prepayments  
Assumed Price 19.875%\***

<b>PSA Prepayment Assumption Rates</b>				
<u>100%</u>	<u>205%</u>	<u>315%</u>	<u>350%</u>	<u>500%</u>
15.1%	7.9%	0.0%	(2.6)%	(14.0)%

**SECURITY GROUP 6**

**Sensitivity of Class IE to Prepayments  
Assumed Price 21.5%\***

<b>PSA Prepayment Assumption Rates</b>				
<u>100%</u>	<u>212%</u>	<u>279%</u>	<u>350%</u>	<u>500%</u>
12.4%	4.8%	0.0%	(5.1)%	(16.4)%

**SECURITY GROUP 7**

**Sensitivity of Class ES to Prepayments  
Assumed Price 5.0546875%\***

<u>LIBOR</u>	<b>PSA Prepayment Assumption Rates</b>			
	<u>150%</u>	<u>327%</u>	<u>500%</u>	<u>700%</u>
1.000000% .....	51.9%	43.5%	35.1%	25.1%
2.512630% .....	16.6%	7.1%	(2.5)%	(14.1)%
3.151315% .....	1.8%	(8.3)%	(18.7)%	(31.4)%
3.790000% and above .....	**	**	**	**

\* The price does not include accrued interest. Accrued interest has been added to the price in calculating the yields set forth in the table.

\*\* Indicates that investors will suffer a loss of virtually all of their investment.



**Sensitivity of Class NS to Prepayments**  
**Assumed Price 4.484375%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>150%</u>	<u>327%</u>	<u>500%</u>	<u>700%</u>
1.000000% .....	59.6%	50.3%	40.8%	29.6%
2.512630% .....	19.8%	9.8%	(0.5)%	(12.9)%
3.151315% .....	3.4%	(7.0)%	(17.8)%	(31.0)%
3.790000% and above .....	**	**	**	**

**Sensitivity of Class SE to Prepayments**  
**Assumed Price 6.34375%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>150%</u>	<u>327%</u>	<u>500%</u>	<u>700%</u>
1.000000% .....	38.5%	30.0%	21.6%	11.6%
2.512630% .....	10.7%	1.2%	(8.6)%	(20.2)%
3.151315% .....	(1.4)%	(11.5)%	(21.9)%	(34.6)%
3.790000% and above .....	**	**	**	**

**Sensitivity of Class SF to Prepayments**  
**Assumed Price 5.21875%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>150%</u>	<u>327%</u>	<u>500%</u>	<u>700%</u>
1.000000% .....	50.0%	41.9%	33.8%	24.3%
2.512630% .....	15.8%	6.5%	(2.9)%	(14.2)%
3.151315% .....	1.4%	(8.6)%	(18.9)%	(31.3)%
3.790000% and above .....	**	**	**	**

**SECURITY GROUP 8**

**Sensitivity of Class SB to Prepayments**  
**Assumed Price 17.3125%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>150%</u>	<u>290%</u>	<u>450%</u>	<u>600%</u>
1.000% .....	21.7%	14.5%	6.1%	(2.0)%
2.498% .....	11.7%	4.1%	(4.7)%	(13.3)%
4.299% .....	(0.9)%	(8.8)%	(18.2)%	(27.5)%
6.100% and above .....	**	**	**	**

\* The price does not include accrued interest. Accrued interest has been added to the price in calculating the yields set forth in the table.

\*\* Indicates that investors will suffer a loss of virtually all of their investment.

**Sensitivity of Class SC to Prepayments**  
**Assumed Price 15.84375%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>150%</u>	<u>290%</u>	<u>450%</u>	<u>600%</u>
1.000% .....	24.9%	17.8%	9.6%	1.6%
2.498% .....	13.9%	6.5%	(2.3)%	(10.7)%
4.299% .....	0.4%	(7.5)%	(16.9)%	(26.1)%
6.100% and above .....	**	**	**	**

**Sensitivity of Class SD to Prepayments**  
**Assumed Price 14.234375%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>150%</u>	<u>290%</u>	<u>450%</u>	<u>600%</u>
1.000% .....	29.0%	21.8%	13.4%	5.4%
2.498% .....	16.8%	9.3%	0.4%	(8.1)%
4.299% .....	1.9%	(6.0)%	(15.5)%	(24.8)%
6.100% and above .....	**	**	**	**

**SECURITY GROUP 10**

**Sensitivity of Class SA to Prepayments**  
**Assumed Price 12.015625%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>100%</u>	<u>243%</u>	<u>350%</u>	<u>500%</u>
1.0000% .....	32.4%	21.8%	13.5%	1.3%
2.5090% .....	17.9%	7.9%	0.1%	(11.5)%
4.3045% .....	(0.7)%	(9.9)%	(17.1)%	(27.7)%
6.1000% and above .....	**	**	**	**

**Sensitivity of Class SG to Prepayments**  
**Assumed Price 11.25%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>100%</u>	<u>243%</u>	<u>350%</u>	<u>500%</u>
1.0000% .....	34.8%	24.1%	15.8%	3.4%
2.5090% .....	19.1%	9.1%	1.2%	(10.4)%
4.3045% .....	(1.0)%	(10.2)%	(17.4)%	(28.0)%
6.1000% and above .....	**	**	**	**

\* The price does not include accrued interest. Accrued interest has been added to the price in calculating the yields set forth in the table.

\*\* Indicates that investors will suffer a loss of virtually all of their investment.

**SECURITY GROUP 11**

**Sensitivity of Class IJ to Prepayments  
Assumed Price 19.006%\***

<b>PSA Prepayment Assumption Rates</b>				
<u>150%</u>	<u>286%</u>	<u>315%</u>	<u>500%</u>	<u>700%</u>
9.5%	0.0%	(2.1)%	(15.9)%	(32.2)%

**SECURITY GROUPS 4 AND 11**

**Sensitivity of Class IM to Prepayments  
Assumed Price 19.388%\***

<b>PSA Prepayment Assumption Rates</b>				
<u>150%</u>	<u>281%</u>	<u>315%</u>	<u>500%</u>	<u>700%</u>
9.1%	0.0%	(2.4)%	(16.2)%	(32.5)%

**SECURITY GROUP 12**

**Sensitivity of Class IK to Prepayments  
Assumed Price 19.95%\***

<b>PSA Prepayment Assumption Rates</b>				
<u>150%</u>	<u>315%</u>	<u>338%</u>	<u>500%</u>	<u>700%</u>
13.5%	1.7%	0.0%	(12.3)%	(28.9)%

**SECURITY GROUPS 1, 3 AND 12**

**Sensitivity of Class AI to Prepayments  
Assumed Price 19.6%\***

<b>PSA Prepayment Assumption Rates</b>				
<u>150%</u>	<u>315%</u>	<u>343%</u>	<u>500%</u>	<u>700%</u>
13.9%	2.1%	0.1%	(12.0)%	(28.6)%

**SECURITY GROUP 13**

**Sensitivity of Class PS to Prepayments  
Assumed Price 14.328125%\***

<b>LIBOR</b>	<b>PSA Prepayment Assumption Rates</b>			
	<u>225%</u>	<u>290%</u>	<u>349%</u>	<u>600%</u>
1.000% .....	20.8%	20.8%	20.8%	9.6%
2.498% .....	7.9%	7.9%	7.9%	(4.8)%
4.299% .....	(8.4)%	(8.4)%	(8.4)%	(22.7)%
6.100% and above .....	**	**	**	**

\* The price does not include accrued interest. Accrued interest has been added to the price in calculating the yields set forth in the table.

\*\* Indicates that investors will suffer a loss of virtually all of their investment.

**Sensitivity of Class SH to Prepayments**  
**Assumed Price 13.03125%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>225%</u>	<u>290%</u>	<u>349%</u>	<u>600%</u>
1.000% .....	29.2%	26.0%	23.0%	10.0%
2.498% .....	15.7%	12.2%	9.0%	(4.8)%
4.299% .....	(0.8)%	(4.5)%	(7.9)%	(23.0)%
6.100% and above .....	**	**	**	**

**Sensitivity of Class SN to Prepayments**  
**Assumed Price 14.6484375%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>225%</u>	<u>290%</u>	<u>349%</u>	<u>600%</u>
1.000% .....	24.3%	21.0%	18.0%	5.1%
2.498% .....	12.2%	8.8%	5.6%	(8.2)%
4.299% .....	(2.6)%	(6.3)%	(9.7)%	(24.8)%
6.100% and above .....	**	**	**	**

\* The price does not include accrued interest. Accrued interest has been added to the price in calculating the yields set forth in the table.

\*\* Indicates that investors will suffer a loss of virtually all of their investment.

**CERTAIN UNITED STATES FEDERAL INCOME TAX CONSEQUENCES**

The following tax discussion, when read in conjunction with the discussion of “Certain United States Federal Income Tax Consequences” in the Base Offering Circular, describes the material United States federal income tax considerations for investors in the Securities. However, these two tax discussions do not purport to deal with all United States federal tax consequences applicable to all categories of investors, some of which may be subject to special rules.

**REMIC Elections**

In the opinion of Cleary Gottlieb Steen & Hamilton LLP, the Trust will constitute a Double REMIC Series for United States federal income tax purposes. Separate REMIC elections will be made for the Pooling REMIC and the Issuing REMIC.

**Regular Securities**

The Regular Securities will be treated as debt instruments issued by the Issuing REMIC for United States federal income tax purposes. Income on the Regular Securities must be reported under an accrual method of accounting.

The Notional and Accrual Classes of Regular Securities will be issued with original issue discount (“OID”), and certain other Classes of Regular Securities may be issued with OID. See “*Certain United States Federal Income Tax Consequences — Tax Treatment of Regular Securities — Original Issue Discount,*” “*— Variable Rate Securities*” and “*— Interest Weighted Securities and Non-VRDI Securities*” in the Base Offering Circular.

The prepayment assumption that should be used in determining the rates of accrual of OID, if any, on the Regular Securities (as described in “Yield, Maturity and Prepayment Considerations” in this Supplement) is as follows:

<u>Group(s)</u>	<u>PSA</u>
1, 2, 3, 4, 11 and 12	315%
5	205%
6	212%
7	327%
8 and 13	290%
9	175%
10	243%

In the case of the Floating Rate Classes, the interest rate values to be used for these determinations are the initial Interest Rates as set forth in the Terms Sheet under “Interest Rates.” No representation is made, however, about the rate at which prepayments on the Mortgage Loans underlying any Group of Trust Assets actually will occur or the level of LIBOR at any time after the date of this Supplement. See “*Certain United States Federal Income Tax Consequences*” in the Base Offering Circular.

The Regular Securities generally will be treated as “regular interests” in a REMIC for domestic building and loan associations and “real estate assets” for real estate investment trusts (“REITs”) as described in “*Certain United States Federal Income Tax Consequences*” in the Base Offering Circular. Similarly, interest on the Regular Securities will be considered “interest on obligations secured by mortgages on real property” for REITs as described in “*Certain United States Federal Income Tax Consequences*” in the Base Offering Circular.

A Holder of Regular Securities that uses an accrual method of accounting for tax purposes generally will be required to include certain amounts in income no later than the time such amounts are reflected on certain financial statements. The application of this rule thus may require the accrual of income earlier than would be the case under the general tax rules described under “*Certain United States Federal Income Tax Consequences — Tax Treatment of Regular Securities*” in the Base Offering Circular, although the precise application of this rule is unclear at this time. This rule generally will be effective for Regular Securities issued with original issue discount for tax years beginning after December 31, 2018. The Service issued Notice 2018-80 stating its intention to issue regulations that would exclude market discount from this rule. Prospective investors in Regular Securities that use an accrual method of accounting for tax purposes are urged to consult with their tax advisors regarding the potential applicability of this legislation to their particular situation.

### **Residual Securities**

The Class RR Securities will represent the beneficial ownership of the Residual Interest in the Pooling REMIC and the beneficial ownership of the Residual Interest in the Issuing REMIC. The Residual Securities, *i.e.*, the Class RR Securities, generally will be treated as “residual interests” in a REMIC for domestic building and loan associations and as “real estate assets” for REITs, as described in “*Certain United States Federal Income Tax Consequences*” in the Base Offering Circular, but will not be treated as debt for United States federal income tax purposes. Instead, the Holders of the Residual Securities will be required to report, and will be taxed on, their pro rata shares of the taxable income or loss of the Trust REMICs, and these requirements will continue until there are no outstanding regular interests in the respective Trust REMICs. Thus, Residual Holders will have taxable income attributable to the Residual Securities even though they will not receive principal or interest distributions with respect to

the Residual Securities, which could result in a negative after-tax return for the Residual Holders. Even though the Holders of the Residual Securities are not entitled to any stated principal or interest payments on the Residual Securities, the Trust REMICs may have substantial taxable income in certain periods, and offsetting tax losses may not occur until much later periods. Accordingly, the Holders of the Residual Securities may experience substantial adverse tax timing consequences. Prospective investors are urged to consult their own tax advisors and consider the after-tax effect of ownership of the Residual Securities and the suitability of the Residual Securities to their investment objectives.

Prospective Holders of Residual Securities should be aware that, at issuance, based on the expected prices of the Regular and Residual Securities and the prepayment assumption described above, the residual interests represented by the Residual Securities will be treated as “noneconomic residual interests” as that term is defined in Treasury regulations.

OID accruals on the Underlying Certificates will be computed using the same prepayment assumption as set forth under “Certain United States Federal Income Tax Consequences — Regular Securities” in this Supplement.

An individual, trust or estate that holds Residual Securities (directly or indirectly through a grantor trust, a partnership, an S corporation, a common trust fund, or a nonpublicly offered RIC) generally will not be eligible to deduct its allocable share of the Trust REMICs’ fees or expenses under Section 212 of the Code for any taxable year beginning before January 1, 2026. Prospective investors in Residual Securities are urged to consult with their tax advisors regarding the potential applicability of this legislation to their particular situation.

### **MX Securities**

For a discussion of certain United States federal income tax consequences applicable to the MX Classes, see “*Certain United States Federal Income Tax Consequences — Tax Treatment of MX Securities*”, “*— Exchanges of MX Classes and Regular Classes*” and “*— Taxation of Foreign Holders of REMIC Securities and MX Securities*” in the Base Offering Circular.

In the case of certain Holders of MX Securities that use an accrual method of accounting, these tax consequences are modified by newly enacted legislation as described above for a Holder of Regular Securities. Prospective investors in MX Securities that use an accrual method of accounting for tax purposes are urged to consult with their tax advisors regarding the potential applicability of this legislation to their particular situation.

### **Foreign Account Tax Compliance Act**

The Service has issued proposed regulations, on which taxpayers may rely, that exclude gross proceeds from the sale or other disposition of Regular or MX Securities from the application of the withholding tax imposed under FATCA and related administrative guidance. For a discussion of FATCA, see “*Certain United States Federal Income Tax Consequences — Taxation of Foreign Holders of REMIC Securities and MX Securities*” in the Base Offering Circular.

**Investors should consult their own tax advisors in determining the United States federal, state, local, foreign and any other tax consequences to them of the purchase, ownership and disposition of the Securities.**

## ERISA MATTERS

Ginnie Mae guarantees distributions of principal and interest with respect to the Securities. The Ginnie Mae Guaranty is supported by the full faith and credit of the United States of America. The Regular and MX Securities will qualify as “guaranteed governmental mortgage pool certificates” within the meaning of a Department of Labor regulation, the effect of which is to provide that mortgage loans and participations therein underlying a “guaranteed governmental mortgage pool certificate” will not be considered assets of an employee benefit plan subject to the Employee Retirement Income Security Act of 1974, as amended (“ERISA”), or subject to section 4975 of the Code (each, a “Plan”), solely by reason of the Plan’s purchase and holding of that certificate.

Governmental plans and certain church plans, while not subject to the fiduciary responsibility provisions of ERISA or the prohibited transaction provisions of ERISA and the Code, may nevertheless be subject to local, state or other federal laws that are substantially similar to the foregoing provisions of ERISA and the Code.

Fiduciaries of any such plans should consult with their counsel before purchasing any of the Securities. In addition, because the Sponsor or the Co-Sponsor or any of their respective affiliates may receive certain benefits in connection with the sale or holding of the Regular or MX Securities, the purchase of the Regular or MX Securities using Plan assets over which any of these parties or their affiliates has discretionary authority or control, or renders “investment advice” (within the meaning of a Department of Labor regulation) for a fee with respect to the assets of a Plan, or is the employer or other sponsor of the Plan, might be deemed to be a violation of a provision of Title I of ERISA or Section 4975 of the Code. Accordingly, the Regular or MX Securities may not be purchased using the assets of any Plan if the Sponsor or the Co-Sponsor or any of their respective affiliates has discretionary authority or control or renders investment advice for a fee with respect to the assets of the Plan, or is the employer or other sponsor of the Plan, unless an applicable prohibited transaction exemption is available to cover the purchase or holding of the Regular or MX Securities or the transaction is not otherwise prohibited.

**Prospective Plan Investors should consult with their advisors, however, to determine whether the purchase, holding or resale of a Security could give rise to a transaction that is prohibited or is not otherwise permissible under either ERISA or the Code.**

*See “ERISA Considerations” in the Base Offering Circular.*

The Residual Securities are not offered to, and may not be transferred to, a Plan Investor.

## LEGAL INVESTMENT CONSIDERATIONS

Institutions whose investment activities are subject to legal investment laws and regulations or to review by certain regulatory authorities may be subject to restrictions on investment in the Securities. **No representation is made about the proper characterization of any Class for legal investment or other purposes, or about the permissibility of the purchase by particular investors of any Class under applicable legal investment restrictions.**

**Investors should consult their own legal advisors regarding applicable investment restrictions and the effect of any restrictions on the liquidity of the Securities prior to investing in the Securities.**

*See “Legal Investment Considerations” in the Base Offering Circular.*

## **PLAN OF DISTRIBUTION**

Subject to the terms and conditions of the Sponsor Agreement, the Sponsor has agreed to purchase all of the Securities if any are sold and purchased. The Sponsor proposes to offer the Regular and MX Classes to the public from time to time for sale in negotiated transactions at varying prices to be determined at the time of sale, plus accrued interest from (1) February 1, 2019 on the Fixed Rate Classes and (2) February 20, 2019 on the Floating Rate and Inverse Floating Rate Classes. The Sponsor may effect these transactions by sales to or through certain securities dealers. These dealers may receive compensation in the form of discounts, concessions or commissions from the Sponsor and/or commissions from any purchasers for which they act as agents. Some of the Securities may be sold through dealers in relatively small sales. In the usual case, the commission charged on a relatively small sale of securities will be a higher percentage of the sales price than that charged on a large sale of securities.

## **INCREASE IN SIZE**

Before the Closing Date, Ginnie Mae, the Trustee and the Sponsor may agree to increase the size of this offering. In that event, the Securities will have the same characteristics as described in this Supplement, except that (1) the Original Class Principal Balance (or original Class Notional Balance) and (2) the Aggregate Scheduled Principal Balances of each Class receiving principal distributions or interest distributions based upon a notional balance from the same Trust Asset Group will increase by the same proportion. The Trust Agreement, the Final Data Statement, the Final Schedules and the Supplemental Statement, if any, will reflect any increase in the size of the transaction.

## **LEGAL MATTERS**

Certain legal matters will be passed upon for Ginnie Mae by Hunton Andrews Kurth LLP, for the Trust by Cleary Gottlieb Steen & Hamilton LLP and Marcell Solomon & Associates, P.C., and for the Trustee by Nixon Peabody LLP.



Schedule I

Available Combinations(1)

REMIC Securities		MX Securities						
Class	Original Class Principal Balance or Notional Balance	Related MX Class	Maximum Original Class Principal Balance or Notional Balance(2)	Principal Type(3)	Interest Rate	Interest Type(3)	CUSIP Number	Final Distribution Date(4)
<b>Security Group 2</b>								
Combination 1								
KF	\$ 70,164,898	JF	\$ 70,164,898	PT	(5)	FLT	38381RCF4	February 2049
KI	70,164,898							
<b>Security Groups 1 and 3</b>								
Combination 2(6)								
Z	\$ 3,582,951	ZG	\$ 5,952,027	SEQ	3.25%	FIX/Z	38381RCG2	February 2049
ZD	2,369,076							
<b>Security Group 8</b>								
Combination 3								
VA	\$ 8,977,301	AL	\$ 31,206,786	SEQ	3.00%	FIX	38381RCH0	February 2049
VZ	22,229,485							
<b>Security Groups 4 and 11</b>								
Combination 4(6)								
IB	\$ 22,270,670	IM	\$ 36,372,403	NTL(SC/PT)	4.50%	FIX/IO	38381RCJ6	February 2049
IJ	14,101,733							
<b>Security Groups 1, 3 and 12</b>								
Combination 5(6)								
ID	\$ 23,498,212	AI	\$ 63,392,483	NTL(SC/PT)	5.50%	FIX/IO	38381RCK3	February 2049
IK	8,467,728							
IO	31,426,543							
<b>Security Group 13</b>								
Combination 6								
AN	\$ 21,688,000	BA	\$ 115,738,000	SEQ/PAC/AD	3.00%	FIX	38381RCL1	June 2046
PH	94,050,000							

REMIC Securities

MX Securities

Class	Original Class		Related MX Class	Maximum Original Class		Principal Type(3)	Interest Rate	Interest Type(3)	CUSIP Number	Final Distribution Date(4)
	Principal Balance or Class Notional Balance	Notional Balance		Principal Balance or Class Notional Balance(2)	Balance(2)					
<b>Security Groups 8 and 13</b>										
Combination 7(6)										
FA	\$116,967,713		FE	\$326,853,618		PT/PAC/AD	(5)	FLT	38381RCM9	February 2049
FH	106,281,643									
FN	37,181,717									
PF	66,422,545									
Combination 8(6)										
VA	\$ 8,977,301		MV	\$ 18,099,301		SEQ/PAC/AD	3.00%	FIX	38381RCN7	June 2030
VH	7,339,000									
VN	1,783,000									
Combination 9(6)										
VZ	\$ 22,229,485		MZ	\$ 44,816,357		SEQ/PAC/AD	3.00%	FIX/Z	38381RCP2	February 2049
ZH	18,171,583									
ZN	4,415,289									
Combination 10(6)										
MV(7)	\$ 18,099,301		LA	\$ 62,915,658		SEQ/PAC/AD	3.00%	FIX	38381RCQ0	February 2049
MZ(7)	44,816,357									
Combination 11(6)										
FA	\$116,967,713		FG	\$260,431,073		PT	(5)	FLT	38381RCR8	February 2049
FH	106,281,643									
FN	37,181,717									

(1) All exchanges must comply with minimum denomination restrictions.

(2) The amount shown for each MX Class represents the maximum Original Class Principal Balance (or original Class Notional Balance) of that Class, assuming it were to be issued on the Closing Date.

(3) As defined under "Class Types" in Appendix I to the Base Offering Circular.

(4) See "Yield, Maturity and Prepayment Considerations — Final Distribution Date" in this Supplement.

(5) The Interest Rate will be calculated as described under "Terms Sheet — Interest Rates" in this Supplement.

(6) Derived from REMIC Classes relating to separate Groups.

(7) MX Class.

**Schedule II**

**SCHEDULED PRINCIPAL BALANCES**

<u>Distribution Date</u>	<u>Classes PF, PH, VH and ZH (in the aggregate)</u>
Initial Balance . . . . .	\$185,983,128.00
March 2019 . . . . .	185,430,039.90
April 2019 . . . . .	184,795,764.44
May 2019 . . . . .	184,080,546.14
June 2019 . . . . .	183,284,722.31
July 2019 . . . . .	182,408,723.13
August 2019 . . . . .	181,453,071.49
September 2019 . . . . .	180,418,382.74
October 2019 . . . . .	179,305,364.24
November 2019 . . . . .	178,114,814.65
December 2019 . . . . .	176,847,623.19
January 2020 . . . . .	175,504,768.58
February 2020 . . . . .	174,087,317.88
March 2020 . . . . .	172,596,425.16
April 2020 . . . . .	171,033,329.92
May 2020 . . . . .	169,399,355.45
June 2020 . . . . .	167,695,906.92
July 2020 . . . . .	165,924,469.35
August 2020 . . . . .	164,086,605.45
September 2020 . . . . .	162,183,953.19
October 2020 . . . . .	160,218,223.35
November 2020 . . . . .	158,191,196.83
December 2020 . . . . .	156,104,721.88
January 2021 . . . . .	153,960,711.09
February 2021 . . . . .	151,761,138.41
March 2021 . . . . .	149,508,035.86
April 2021 . . . . .	147,209,420.72
May 2021 . . . . .	144,867,217.18
June 2021 . . . . .	142,483,394.73
July 2021 . . . . .	140,092,024.75
August 2021 . . . . .	137,729,442.72
September 2021 . . . . .	135,395,284.51
October 2021 . . . . .	133,089,190.39
November 2021 . . . . .	130,810,805.07
December 2021 . . . . .	128,559,777.58
January 2022 . . . . .	126,335,761.23
February 2022 . . . . .	124,138,413.58
March 2022 . . . . .	121,967,396.38
April 2022 . . . . .	119,822,375.49
May 2022 . . . . .	117,703,020.87
June 2022 . . . . .	115,609,006.51
July 2022 . . . . .	113,540,010.39
August 2022 . . . . .	111,495,714.41

<u>Distribution Date</u>	<u>Classes PF, PH, VH and ZH (in the aggregate)</u>
September 2022	\$109,475,804.37
October 2022	107,479,969.90
November 2022	105,507,904.43
December 2022	103,559,305.13
January 2023	101,633,872.90
February 2023	99,731,312.24
March 2023	97,851,331.31
April 2023	95,993,641.82
May 2023	94,157,959.00
June 2023	92,344,001.57
July 2023	90,551,491.67
August 2023	88,780,154.86
September 2023	87,029,720.03
October 2023	85,299,919.41
November 2023	83,590,488.48
December 2023	81,901,165.97
January 2024	80,231,693.78
February 2024	78,581,817.01
March 2024	76,951,283.81
April 2024	75,339,845.48
May 2024	73,754,677.56
June 2024	72,202,011.76
July 2024	70,681,191.20
August 2024	69,191,572.12
September 2024	67,732,523.66
October 2024	66,303,427.54
November 2024	64,903,677.89
December 2024	63,532,680.92
January 2025	62,189,854.76
February 2025	60,874,629.15
March 2025	59,586,445.28
April 2025	58,324,755.49
May 2025	57,089,023.12
June 2025	55,878,722.23
July 2025	54,693,337.43
August 2025	53,532,363.65
September 2025	52,395,305.95
October 2025	51,281,679.28
November 2025	50,191,008.34
December 2025	49,122,827.35
January 2026	48,076,679.86
February 2026	47,052,118.59
March 2026	46,048,705.22
April 2026	45,066,010.21
May 2026	44,103,612.67
June 2026	43,161,100.13
July 2026	42,238,068.40

<u>Distribution Date</u>	<u>Classes PF, PH, VH and ZH (in the aggregate)</u>
August 2026 . . . . .	\$ 41,334,121.42
September 2026 . . . . .	40,448,871.07
October 2026 . . . . .	39,581,937.02
November 2026 . . . . .	38,732,946.59
December 2026 . . . . .	37,901,534.59
January 2027 . . . . .	37,087,343.15
February 2027 . . . . .	36,290,021.59
March 2027 . . . . .	35,509,226.32
April 2027 . . . . .	34,744,620.60
May 2027 . . . . .	33,995,874.50
June 2027 . . . . .	33,262,664.71
July 2027 . . . . .	32,544,674.43
August 2027 . . . . .	31,841,593.22
September 2027 . . . . .	31,153,116.91
October 2027 . . . . .	30,478,947.43
November 2027 . . . . .	29,818,792.73
December 2027 . . . . .	29,172,366.61
January 2028 . . . . .	28,539,388.67
February 2028 . . . . .	27,919,584.14
March 2028 . . . . .	27,312,683.78
April 2028 . . . . .	26,718,423.78
May 2028 . . . . .	26,136,545.65
June 2028 . . . . .	25,566,796.11
July 2028 . . . . .	25,008,926.98
August 2028 . . . . .	24,462,695.10
September 2028 . . . . .	23,927,862.21
October 2028 . . . . .	23,404,194.83
November 2028 . . . . .	22,891,464.23
December 2028 . . . . .	22,389,446.28
January 2029 . . . . .	21,897,921.37
February 2029 . . . . .	21,416,674.33
March 2029 . . . . .	20,945,494.33
April 2029 . . . . .	20,484,174.81
May 2029 . . . . .	20,032,513.37
June 2029 . . . . .	19,590,311.71
July 2029 . . . . .	19,157,375.54
August 2029 . . . . .	18,733,514.49
September 2029 . . . . .	18,318,542.03
October 2029 . . . . .	17,912,275.44
November 2029 . . . . .	17,514,535.65
December 2029 . . . . .	17,125,147.25
January 2030 . . . . .	16,743,938.36
February 2030 . . . . .	16,370,740.59
March 2030 . . . . .	16,005,388.95
April 2030 . . . . .	15,647,721.80
May 2030 . . . . .	15,297,580.78
June 2030 . . . . .	14,954,810.72

<u>Distribution Date</u>	<u>Classes PF, PH, VH and ZH (in the aggregate)</u>
July 2030 . . . . .	\$ 14,619,259.61
August 2030 . . . . .	14,290,778.52
September 2030 . . . . .	13,969,221.54
October 2030 . . . . .	13,654,445.71
November 2030 . . . . .	13,346,310.98
December 2030 . . . . .	13,044,680.13
January 2031 . . . . .	12,749,418.76
February 2031 . . . . .	12,460,395.15
March 2031 . . . . .	12,177,480.28
April 2031 . . . . .	11,900,547.76
May 2031 . . . . .	11,629,473.75
June 2031 . . . . .	11,364,136.94
July 2031 . . . . .	11,104,418.47
August 2031 . . . . .	10,850,201.90
September 2031 . . . . .	10,601,373.18
October 2031 . . . . .	10,357,820.56
November 2031 . . . . .	10,119,434.56
December 2031 . . . . .	9,886,107.94
January 2032 . . . . .	9,657,735.64
February 2032 . . . . .	9,434,214.74
March 2032 . . . . .	9,215,444.41
April 2032 . . . . .	9,001,325.89
May 2032 . . . . .	8,791,762.41
June 2032 . . . . .	8,586,659.19
July 2032 . . . . .	8,385,923.38
August 2032 . . . . .	8,189,464.03
September 2032 . . . . .	7,997,192.02
October 2032 . . . . .	7,809,020.07
November 2032 . . . . .	7,624,862.68
December 2032 . . . . .	7,444,636.09
January 2033 . . . . .	7,268,258.27
February 2033 . . . . .	7,095,648.83
March 2033 . . . . .	6,926,729.04
April 2033 . . . . .	6,761,421.81
May 2033 . . . . .	6,599,651.57
June 2033 . . . . .	6,441,344.33
July 2033 . . . . .	6,286,427.62
August 2033 . . . . .	6,134,830.44
September 2033 . . . . .	5,986,483.23
October 2033 . . . . .	5,841,317.88
November 2033 . . . . .	5,699,267.66
December 2033 . . . . .	5,560,267.21
January 2034 . . . . .	5,424,252.52
February 2034 . . . . .	5,291,160.87
March 2034 . . . . .	5,160,930.85
April 2034 . . . . .	5,033,502.30
May 2034 . . . . .	4,908,816.29

<u>Distribution Date</u>	<u>Classes PF, PH, VH and ZH (in the aggregate)</u>
June 2034 . . . . .	\$ 4,786,815.10
July 2034 . . . . .	4,667,442.20
August 2034 . . . . .	4,550,642.23
September 2034 . . . . .	4,436,360.95
October 2034 . . . . .	4,324,545.24
November 2034 . . . . .	4,215,143.08
December 2034 . . . . .	4,108,103.52
January 2035 . . . . .	4,003,376.63
February 2035 . . . . .	3,900,913.55
March 2035 . . . . .	3,800,666.40
April 2035 . . . . .	3,702,588.30
May 2035 . . . . .	3,606,633.31
June 2035 . . . . .	3,512,756.47
July 2035 . . . . .	3,420,913.72
August 2035 . . . . .	3,331,061.93
September 2035 . . . . .	3,243,158.85
October 2035 . . . . .	3,157,163.09
November 2035 . . . . .	3,073,034.13
December 2035 . . . . .	2,990,732.29
January 2036 . . . . .	2,910,218.69
February 2036 . . . . .	2,831,455.27
March 2036 . . . . .	2,754,404.76
April 2036 . . . . .	2,679,030.64
May 2036 . . . . .	2,605,297.17
June 2036 . . . . .	2,533,169.33
July 2036 . . . . .	2,462,612.84
August 2036 . . . . .	2,393,594.11
September 2036 . . . . .	2,326,080.27
October 2036 . . . . .	2,260,039.12
November 2036 . . . . .	2,195,439.11
December 2036 . . . . .	2,132,249.39
January 2037 . . . . .	2,070,439.70
February 2037 . . . . .	2,009,980.43
March 2037 . . . . .	1,950,842.60
April 2037 . . . . .	1,892,997.80
May 2037 . . . . .	1,836,418.24
June 2037 . . . . .	1,781,076.68
July 2037 . . . . .	1,726,946.47
August 2037 . . . . .	1,674,001.51
September 2037 . . . . .	1,622,216.23
October 2037 . . . . .	1,571,565.59
November 2037 . . . . .	1,522,025.11
December 2037 . . . . .	1,473,570.76
January 2038 . . . . .	1,426,179.07
February 2038 . . . . .	1,379,827.02
March 2038 . . . . .	1,334,492.09
April 2038 . . . . .	1,290,152.21

<u>Distribution Date</u>	<u>Classes PF, PH, VH and ZH (in the aggregate)</u>
May 2038 .....	\$ 1,246,785.79
June 2038 .....	1,204,371.69
July 2038 .....	1,162,889.20
August 2038 .....	1,122,318.05
September 2038 .....	1,082,638.39
October 2038 .....	1,043,830.80
November 2038 .....	1,005,876.24
December 2038 .....	968,756.10
January 2039 .....	932,452.12
February 2039 .....	896,946.47
March 2039 .....	862,221.66
April 2039 .....	828,260.58
May 2039 .....	795,046.47
June 2039 .....	762,562.93
July 2039 .....	730,793.90
August 2039 .....	699,723.67
September 2039 .....	669,336.84
October 2039 .....	639,618.35
November 2039 .....	610,553.45
December 2039 .....	582,127.70
January 2040 .....	554,326.97
February 2040 .....	527,137.42
March 2040 .....	500,545.51
April 2040 .....	474,537.97
May 2040 .....	449,101.83
June 2040 .....	424,224.39
July 2040 .....	399,893.20
August 2040 .....	376,096.10
September 2040 .....	352,821.16
October 2040 .....	330,056.73
November 2040 .....	307,791.38
December 2040 .....	286,013.94
January 2041 .....	264,713.48
February 2041 .....	243,879.27
March 2041 .....	223,500.86
April 2041 .....	203,567.97
May 2041 .....	184,070.57
June 2041 .....	164,998.84
July 2041 .....	146,343.15
August 2041 .....	128,094.09
September 2041 .....	110,242.45
October 2041 .....	92,779.21
November 2041 .....	75,695.55
December 2041 .....	58,982.84
January 2042 .....	42,632.61
February 2042 .....	26,636.61
March 2042 .....	10,986.72
April 2042 and thereafter .....	0.00



Underlying Certificates

Trust Asset Group or Subgroup	Issuer	Series	Class	Issue Date	CUSIP Number	Interest Rate	Interest Type	Final Distribution Date	Principal Type	Original Principal or Notional Balance of Class	Underlying Certificate Factor(2)	Principal or Notional Balance in Trust	Percentage of Class in Trust	Approximate Weighted Average Coupon of Mortgage Loans(3)	Approximate Weighted Remaining Term to Maturity of Mortgage Loans (in months)(3)	Approximate Weighted Average Loan Age of Mortgage Loans (in months)(3)	Ginnie Mae I or II
6C	Ginnie Mae	2018-113	AC(4)	August 30, 2018	38380X3B1	3.5%	FIX	August 2048	SC/PT	\$41,149,593	0.90094887	\$ 9,234,725	24.9091163551%	(4)	(4)	(4)	(4)
11	Ginnie Mae	2019-005	IO	January 30, 2019	38381BZU1	4.5	FIX/IO	January 2049	NTL(PT)	14,251,309	0.98950447	14,101,733	100.0000000000	4.930%	240	110	II
12	Ginnie Mae	2016-093	DI	July 29, 2016	38379XW48	5.5	FIX/IO	July 2046	NTL(PT)	20,865,923	0.40581617	8,467,728	100.0000000000	5.936	223	129	II

- (1) As defined under "Class Types" in Appendix I to the Base Offering Circular.
- (2) Underlying Certificate Factors are as of February 2019.
- (3) Based on information as of February 2019.
- (4) Ginnie Mae 2018-113 Class AC is related to separate Trust Asset Subgroups and is backed by a previously issued REMIC certificate, Class PB from Ginnie Mae 2009-029, and a previously issued MX certificate, Class HD from Ginnie Mae 2010-014. These Trust Asset Subgroups and previously issued certificates are backed by certain mortgage loans whose approximate weighted average characteristics are as follows:

Series	Class or Trust Asset Subgroup	Approximate Weighted			Ginnie Mae I or II
		Average Remaining Term to Maturity of Mortgage Loans (in months)(3)	Average Loan Age of Mortgage Loans (in months)(3)	Weighted Average Age of Mortgage Loans (in months)(3)	
2009-029	PB	5.994%	224	126	II
2010-014	HD	6.000	165	182	I
2018-113	7A	6.000	151	193	I
2018-113	7B	5.911	193	153	II



**\$1,528,753,365**

**Government National  
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**Guaranteed REMIC  
Pass-Through Securities  
and MX Securities  
Ginnie Mae REMIC Trust 2019-020**

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***OFFERING CIRCULAR SUPPLEMENT***  
**February 22, 2019**

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**J.P. Morgan  
Mischler Financial Group, Inc.**