

**\$1,172,390,302**  
**Government National Mortgage Association**

**GINNIE MAE®**

**Guaranteed REMIC Pass-Through Securities  
and MX Securities  
Ginnie Mae REMIC Trust 2019-103**

**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-10 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 August 30, 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>						
AB(1) .....	\$83,083,896	2.3%	PT	FIX	38381XV86	August 2049
AC(1) .....	35,963,724	2.3	PT	FIX	38381XV94	August 2049
FA(1) .....	56,497,048	(5)	PT	FLT	38381XW28	August 2049
FB(1) .....	24,455,332	(5)	PT	FLT	38381XW36	August 2049
SA(1) .....	56,497,048	(5)	NTL(PT)	INV/IO	38381XW44	August 2049
SB(1) .....	24,455,332	(5)	NTL(PT)	INV/IO	38381XW51	August 2049
<b>Security Group 2</b>						
AI .....	25,950,228	4.5	NTL(SC/PT)	FIX/IO	38381XW69	April 2049
BA(1) .....	56,863,477	2.3	SC/PT	FIX	38381XW77	February 2049
BC(1) .....	97,313,358	2.3	SC/PT	FIX	38381XW85	April 2049
BD(1) .....	60,952,381	2.3	PT	FIX	38381XW93	August 2049
FC .....	67,047,619	(5)	PT	FLT	38381XX27	August 2049
FD(1) .....	22,745,390	(5)	SC/PT	FLT	38381XX35	February 2049
FE(1) .....	24,349,836	(5)	SC/PT	FLT	38381XX43	April 2049
SC .....	67,047,619	(5)	NTL(PT)	INV/IO	38381XX50	August 2049
SD(1) .....	22,745,390	(5)	NTL(SC/PT)	INV/IO	38381XX68	February 2049
SE(1) .....	24,349,836	(5)	NTL(SC/PT)	INV/IO	38381XX76	April 2049
<b>Security Group 3</b>						
JA .....	42,206,000	3.5	SEQ	FIX	38381XX84	April 2035
JC(1) .....	52,930,000	3.5	SEQ	FIX	38381XX92	August 2045
JV(1) .....	10,644,000	3.5	SEQ/AD	FIX	38381XY26	August 2032
JZ(1) .....	18,540,337	3.5	SEQ	FIX/Z	38381XY34	August 2049
<b>Security Group 4</b>						
GA(1) .....	67,149,000	3.5	SEQ	FIX	38381XY42	October 2042
GC(1) .....	20,537,000	3.5	SEQ	FIX	38381XY59	May 2046
GI .....	13,755,419	4.0	NTL(PT)	FIX/IO	38381XY67	August 2049
GV(1) .....	5,292,000	3.5	SEQ/AD	FIX	38381XY75	November 2030
GZ(1) .....	11,015,357	3.5	SEQ	FIX/Z	38381XY83	August 2049
MA(1) .....	30,330,000	3.5	SEQ	FIX	38381XY91	October 2042
MC(1) .....	9,004,000	3.5	SEQ	FIX	38381XZ25	April 2046
MI .....	6,213,139	4.0	NTL(PT)	FIX/IO	38381XZ33	August 2049
MV(1) .....	2,455,000	3.5	SEQ/AD	FIX	38381XZ41	November 2030
MZ(1) .....	5,110,113	3.5	SEQ	FIX/Z	38381XZ58	August 2049
NA(1) .....	36,259,000	3.5	SEQ	FIX	38381XZ66	October 2042
NC(1) .....	10,820,000	3.5	SEQ	FIX	38381XZ74	April 2046
NI .....	7,427,669	4.0	NTL(PT)	FIX/IO	38381XZ82	August 2049
NV(1) .....	2,921,000	3.5	SEQ/AD	FIX	38381XZ90	November 2030
NZ(1) .....	6,081,356	3.5	SEQ	FIX/Z	38381X2A3	August 2049
VG(1) .....	6,050,000	3.5	SEQ/AD	FIX	38381X2B1	December 2039
VM(1) .....	2,806,000	3.5	SEQ/AD	FIX	38381X2C9	December 2039
VN(1) .....	3,340,000	3.5	SEQ/AD	FIX	38381X2D7	December 2039
<b>Security Group 5</b>						
LA(1) .....	21,048,000	3.5	PAC/AD	FIX	38381X2E5	July 2048
LY(1) .....	1,997,000	3.5	PAC/AD	FIX	38381X2F2	August 2049
LZ .....	5,000,000	3.5	SUP	FIX/Z	38381X2G0	August 2049
<b>Security Group 6</b>						
HE(1) .....	30,000,000	3.0	PAC/AD	FIX	38381X2H8	August 2049
HI .....	9,691,123	4.0	NTL(PAC/AD)	FIX/IO	38381X2J4	August 2049
HM(1) .....	1,341,000	3.0	SC/SEQ/AD	FIX	38381X2K1	July 2049
HN(1) .....	8,659,000	3.0	PAC/AD	FIX	38381X2L9	August 2049
HY .....	104,493	3.0	PAC/AD	FIX	38381X2M7	August 2049
HZ .....	10,362,633	4.0	SUP	FIX/Z	38381X2N5	August 2049
ZH .....	1,000	3.0	SC/SEQ	FIX/Z	38381X2P0	July 2049
ZJ .....	1,000	3.0	PAC/AD	FIX/Z	38381X2Q8	August 2049

(Cover continued on next page)

**Credit Suisse**

**Great Pacific Securities**

**The date of this Offering Circular Supplement is August 23, 2019.**

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 7</b>						
CF .....	\$21,023,412	(5)	PAC/AD	FLT	38381X2R6	August 2049
CS .....	21,023,412	(5)	NTL(PAC/AD)	INV/IO	38381X2S4	August 2049
CZ .....	14,054,930	3.5%	SUP	FIX/Z	38381X2T2	August 2049
DL(1) .....	11,744,210	2.5	SC/PT	FIX	38381X2U9	June 2049
EL(1) .....	11,221,162	2.5	SC/PT	FIX	38381X2V7	April 2049
ID(1) .....	2,609,824	4.5	NTL(SC/PT)	FIX/IO	38381X2W5	June 2049
IE(1) .....	3,740,387	4.5	NTL(SC/PT)	FIX/IO	38381X2X3	April 2049
PA .....	57,799,000	2.5	PAC/AD	FIX	38381X2Y1	July 2048
PB(1) .....	5,271,238	2.5	PAC/AD	FIX	38381X2Z8	August 2049
<b>Security Group 8</b>						
FP(1) .....	33,587,987	(5)	SUP	FLT	38381X3A2	August 2049
PF(1) .....	66,412,013	(5)	PAC	FLT	38381X3B0	August 2049
PS(1) .....	66,412,013	(5)	NTL(PAC)	INV/IO	38381X3C8	August 2049
SP(1) .....	33,587,987	(5)	NTL(SUP)	INV/IO	38381X3D6	August 2049
<b>Residual</b>						
RR .....	0	0.0	NPR	NPR	38381X3E4	August 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 2, 6 and 7 securities that are backed by Underlying Certificates, 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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## 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:** Credit Suisse Securities (USA) LLC

**Co-Sponsor:** Great Pacific Securities

**Trustee:** Wells Fargo Bank, N.A.

**Tax Administrator:** The Trustee

**Closing Date:** August 30, 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 September 2019.

**Trust Assets:**

<u>Trust Asset Group or Subgroup<sup>(1)</sup></u>	<u>Trust Asset Type</u>	<u>Certificate Rate</u>	<u>Original Term To Maturity (in years)</u>
1A	Ginnie Mae II	4.0%	30
1B	Ginnie Mae II	4.0%	30
2A	Underlying Certificate	(2)	(2)
2B	Underlying Certificate	(2)	(2)
2C	Ginnie Mae II	4.5%	30
2D	Underlying Certificate	(2)	(2)
3	Ginnie Mae II	3.5%	30
4A	Ginnie Mae II	4.0%	30
4B	Ginnie Mae II	4.0%	30
4C	Ginnie Mae II	4.0%	30
5	Ginnie Mae II	3.5%	30
6A	Ginnie Mae II	4.0%	30
6B	Underlying Certificate	(2)	(2)
7A	Underlying Certificates	(2)	(2)
7B	Underlying Certificates	(2)	(2)
7C	Ginnie Mae II	3.5%	30
8	Ginnie Mae II	4.0%	30

<sup>(1)</sup> The Group 1, 2, 4, 6 and 7 Trust Assets consist of subgroups (each, a “Subgroup”).

<sup>(2)</sup> Certain information regarding the Underlying Certificates is set forth in Exhibit A to this Supplement.

**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. 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, 3, 4, 5 and 8 Trust Assets and the Subgroup 2C, 6A and 7C 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>Subgroup 1A Trust Assets</b>			
\$139,580,944	355	2	4.490%
<b>Subgroup 1B Trust Assets</b>			
\$60,419,056	359	1	4.430%
<b>Subgroup 2C Trust Assets</b>			
\$128,000,000	355	3	4.955%
<b>Group 3 Trust Assets</b>			
\$124,320,337	357	2	3.976%
<b>Subgroup 4A Trust Assets</b>			
\$110,043,357	355	3	4.577%
<b>Subgroup 4B Trust Assets</b>			
\$49,705,113	358	2	4.540%
<b>Subgroup 4C Trust Assets</b>			
\$59,421,356	358	2	4.500%
<b>Group 5 Trust Assets</b>			
\$28,045,000 <sup>(3)</sup>	358	1	3.970%
<b>Subgroup 6A Trust Assets</b>			
\$49,127,126 <sup>(3)</sup>	358	2	4.500%
<b>Subgroup 7C Trust Assets</b>			
\$98,148,580	359	0	4.060%
<b>Group 8 Trust Assets</b>			
\$100,000,000	359	1	4.500%

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

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

<sup>(3)</sup> More than 10% of the Mortgage Loans underlying the Group 5 Trust Assets and the Subgroup 6A Trust Assets may be higher balance Mortgage Loans. See “*Risk Factors*” in this Supplement.

The actual remaining terms to maturity, loan ages and Mortgage Rates of many of the Mortgage Loans underlying the Group 1, 3, 4, 5 and 8 Trust Assets and the Subgroup 2C, 6A and 7C 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 Subgroup 2A, 2B, 2D, 6B, 7A and 7B 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 or Inverse Floating Rate 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>
<b>Security Group 1</b>						
F .....	LIBOR + 0.45%	2.645%	0.45%	6.50%	0	0.00%
FA .....	LIBOR + 0.45%	2.645%	0.45%	6.50%	0	0.00%
FB .....	LIBOR + 0.45%	2.645%	0.45%	6.50%	0	0.00%
S .....	6.05% – LIBOR	3.855%	0.00%	6.05%	0	6.05%
SA .....	6.05% – LIBOR	3.855%	0.00%	6.05%	0	6.05%
SB .....	6.05% – LIBOR	3.855%	0.00%	6.05%	0	6.05%
<b>Security Group 2</b>						
FC .....	LIBOR + 0.45%	2.645%	0.45%	6.50%	0	0.00%
FD .....	LIBOR + 0.45%	2.645%	0.45%	6.50%	0	0.00%
FE .....	LIBOR + 0.45%	2.645%	0.45%	6.50%	0	0.00%
FG .....	LIBOR + 0.45%	2.645%	0.45%	6.50%	0	0.00%
SC .....	6.05% – LIBOR	3.855%	0.00%	6.05%	0	6.05%
SD .....	6.05% – LIBOR	3.855%	0.00%	6.05%	0	6.05%
SE .....	6.05% – LIBOR	3.855%	0.00%	6.05%	0	6.05%
SG .....	6.05% – LIBOR	3.855%	0.00%	6.05%	0	6.05%
<b>Security Group 7</b>						
CF .....	LIBOR + 0.45%	2.632%	0.45%	6.50%	0	0.00%
CS .....	6.05% – LIBOR	3.868%	0.00%	6.05%	0	6.05%

<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>
<b>Security Group 8</b>						
AF .....	LIBOR + 0.65%	2.845%	0.65%	4.00%	0	0.00%
AS .....	3.35% – LIBOR	1.155%	0.00%	3.35%	0	3.35%
FP .....	LIBOR + 0.65%	2.845%	0.65%	4.00%	0	0.00%
PF .....	LIBOR + 0.65%	2.845%	0.65%	4.00%	0	0.00%
PS .....	3.35% – LIBOR	1.155%	0.00%	3.35%	0	3.35%
SP .....	3.35% – LIBOR	1.155%	0.00%	3.35%	0	3.35%

- (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 will be allocated as follows:

- The Subgroup 1A Principal Distribution Amount, concurrently, to AB and FA, pro rata, until retired
- The Subgroup 1B Principal Distribution Amount, concurrently, to AC and FB, pro rata, until retired

#### **SECURITY GROUP 2**

The Group 2 Principal Distribution Amount will be allocated as follows:

- The Subgroup 2A Principal Distribution Amount, concurrently, to BA and FD, pro rata, until retired
- The Subgroup 2B Principal Distribution Amount to BC, until retired
- The Subgroup 2C Principal Distribution Amount, concurrently, to BD and FC, pro rata, until retired
- The Subgroup 2D Principal Distribution Amount to FE, until retired

#### **SECURITY GROUP 3**

The Group 3 Principal Distribution Amount and the JZ Accrual Amount will be allocated as follows:

- The JZ Accrual Amount to JV, until retired, and then to JZ
- The Group 3 Principal Distribution Amount, sequentially, to JA, JC, JV and JZ, in that order, until retired

#### **SECURITY GROUP 4**

The Group 4 Principal Distribution Amount, the GZ Accrual Amount, the MZ Accrual Amount and the NZ Accrual Amount will be allocated as follows:

- The GZ Accrual Amount, sequentially, to GV and VG, in that order, until retired, and then to GZ
- The MZ Accrual Amount, sequentially, to MV and VM, in that order, until retired, and then to MZ
- The NZ Accrual Amount, sequentially, to NV and VN, in that order, until retired, and then to NZ
- The Subgroup 4A Principal Distribution Amount, sequentially, to GA, GC, GV, VG and GZ, in that order, until retired
- The Subgroup 4B Principal Distribution Amount, sequentially, to MA, MC, MV, VM and MZ, in that order, until retired
- The Subgroup 4C Principal Distribution Amount, sequentially, to NA, NC, NV, VN and NZ, in that order, until retired

#### **SECURITY GROUP 5**

The Group 5 Principal Distribution Amount and the LZ Accrual Amount will be allocated in the following order of priority:

1. Sequentially, to LA and LY, in that order, until reduced to their Aggregate Scheduled Principal Balance for that Distribution Date
2. To LZ, until retired
3. Sequentially, to LA and LY, in that order, without regard to their Aggregate Scheduled Principal Balance, until retired

#### **SECURITY GROUP 6**

The Group 6 Principal Distribution Amount, the HZ Accrual Amount, the ZH Accrual Amount and the ZJ Accrual Amount will be allocated as follows:

- The ZJ Accrual Amount to HN, until retired, and then to ZJ
- The Subgroup 6A Principal Distribution Amount and the HZ Accrual Amount in the following order of priority:
  1. To HE, HN, HY and ZJ, until reduced to their Aggregate Scheduled Principal Balance for that Distribution Date, concurrently, as follows:
    - a. 77.6599683633%, sequentially, to HE and HY, in that order, while outstanding
    - b. 22.3400316367%, sequentially, to HN and ZJ, in that order, while outstanding
  2. To HZ, until retired
  3. To HE, HN, HY and ZJ, in the same manner and order of priority as described in step 1. above, but without regard to their Aggregate Scheduled Principal Balance, until retired
- The Subgroup 6B Principal Distribution Amount and the ZH Accrual Amount, sequentially, to HM and ZH, in that order, until retired



**SECURITY GROUP 7**

The Group 7 Principal Distribution Amount and the CZ Accrual Amount will be allocated as follows:

- The Subgroup 7A Principal Distribution Amount to DL, until retired
- The Subgroup 7B Principal Distribution Amount to EL, until retired
- The Subgroup 7C Principal Distribution Amount and the CZ Accrual Amount in the following order of priority:
  1. To CF, PA and PB, until reduced to their Aggregate Scheduled Principal Balance for that Distribution Date, concurrently, as follows:
    - a. 75.0000005946%, sequentially, to PA and PB, in that order, while outstanding
    - b. 24.9999994054% to CF, while outstanding
  2. To CZ, until retired
  3. To CF, PA and PB, in the same manner and order of priority as described in step 1. above, but without regard to their Aggregate Scheduled Principal Balance, until retired

**SECURITY GROUP 8**

The Group 8 Principal Distribution Amount will be allocated in the following order of priority:

1. To PF, until reduced to its Scheduled Principal Balance for that Distribution Date
2. To FP, until retired
3. To PF, without regard to its Scheduled Principal Balance, until retired

**Scheduled Principal Balances:** The Scheduled Principal Balances or 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 Ranges:

Security Group	PAC Classes	Structuring Ranges
5	LA and LY (in the aggregate) . . . . .	150% PSA through 300% PSA
6	HE, HN, HY and ZJ (in the aggregate) . . . . .	250% PSA through 500% PSA
7	CF, PA and PB (in the aggregate) . . . . .	125% PSA through 230% PSA
8	PF . . . . .	100% PSA through 300% 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, (i) the Class Principal Balance or Class Principal Balances indicated or (ii) the outstanding principal balance of the related Trust Asset Subgroup indicated:

<u>Class</u>	<u>Original Class Notional Balance</u>	<u>Represents Approximately</u>
<b>Security Group 1</b>		
S .....	\$ 80,952,380	100% of FA and FB (in the aggregate) (PT Classes)
SA .....	56,497,048	100% of FA (PT Class)
SB .....	24,455,332	100% of FB (PT Class)
<b>Security Group 2</b>		
AI .....	\$ 25,950,228	26.6666666667% of BC (SC/PT Class)
SC .....	67,047,619	100% of FC (PT Class)
SD .....	22,745,390	100% of FD (SC/PT Class)
SE .....	24,349,836	100% of FE (SC/PT Class)
SG .....	47,095,226	100% of FD and FE (in the aggregate) (SC/PT Classes)
<b>Security Group 4</b>		
GI .....	\$ 13,755,419	12.5% of the Subgroup 4A Trust Assets
MI .....	6,213,139	12.5% of the Subgroup 4B Trust Assets
NI .....	7,427,669	12.5% of the Subgroup 4C Trust Assets
<b>Security Group 6</b>		
HI .....	\$ 9,691,123	25% of HE, HN, HY and ZJ (in the aggregate) (PAC/AD Classes)
IH .....	7,500,000	25% of HE (PAC/AD Class)
<b>Security Group 7</b>		
CS .....	\$ 21,023,412	100% of CF (PAC/AD Class)
DI .....	3,914,736	33.3333333333% of DL (SC/PT Class)
EI .....	4,987,183	44.4444444444% of EL (SC/PT Class)
ID .....	2,609,824	22.2222222222% of DL (SC/PT Class)
IE .....	3,740,387	33.3333333333% of EL (SC/PT Class)
<b>Security Group 8</b>		
AS .....	\$ 33,587,987	100% of FP (SUP Class)
	<u>66,412,013</u>	100% of PF (PAC Class)
	<u>\$100,000,000</u>	
PS .....	\$ 66,412,013	100% of PF (PAC Class)
SP .....	33,587,987	100% of FP (SUP 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 related support classes 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 related support classes.

***The rate of payments on the underlying certificates will directly affect the rate of payments on the group 2, 6 and 7 securities that are backed by underlying certificates.*** The underlying certificates will be sensitive in varying degrees to:

- the rate of payments of principal (including prepayments) of the related mortgage loans, and
- the priorities for the distribution of principal among the classes of the related underlying series.

As described in the related underlying certificate disclosure documents, the underlying certificates included in trust asset subgroups 6B, 7A and 7B

are not entitled to distributions of principal until certain classes of the related underlying series have been retired and, accordingly, distributions of principal of the related mortgage loans for extended periods may be applied to the distribution of principal of such classes of certificates having priority over these underlying certificates. Accordingly, these underlying certificates may receive no principal distributions for extended periods of time.

In addition, the principal entitlements of certain of the underlying certificates included in trust asset subgroups 6B, 7A and 7B on any payment date are calculated, directly or indirectly, on the basis of schedules; no assurance can be given that the underlying certificates will adhere to their schedules. Further, prepayments on the related mortgage loans may have occurred at rates faster or slower than those initially assumed.

This supplement contains no information as to whether the underlying certificates have adhered to any applicable principal balance schedules, whether any related supporting classes remain outstanding or whether the underlying certificates otherwise 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 group 1, 2, 3, 4, 7 and 8 trust assets and up to 100% of the mortgage loans underlying the group 5 and 6 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 2, 6 and 7 securities that are backed by underlying certificates and, in particular, the support, interest only, inverse floating rate,

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, 3, 4, 5 and 8 and Subgroups 2C, 6A and 7C)**

The Trust MBS 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 (Subgroups 2A, 2B, 2D, 6B, 7A and 7B)**

The Subgroup 2A, 2B, 2D, 6B, 7A and 7B 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, 3, 4, 5 and 8 Trust Assets and the Subgroup 2C, 6A and 7C 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, 3, 4, 5 and 8 Trust Assets and the Subgroup 2C, 6A and 7C 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 Mortgage Rates of the Mortgage Loans underlying the Trust MBS. However, the actual remaining terms to maturity, loan ages and 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:

<b>Class</b>	<b>Accrual Period</b>
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 on Ginnie Mae’s website or by calling the Information Agent at (800) 234-GNMA.

### *Accrual Classes*

Each of Classes CZ, GZ, HZ, JZ, LZ, MZ, NZ, ZH and ZJ 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 the Accrual Amounts 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 Ginnie Mae's website.

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 or Classes may be exchanged for proportionate interests in the related Class or Classes of REMIC Securities and, in the case of Combinations 23, 25 and 26, 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.

In the case of Combinations 23, 25 and 26, the related REMIC Securities may be exchanged for proportionate interests in various subcombinations of MX Classes. Similarly, all or a portion of these MX Classes may be exchanged for proportionate interests in the related REMIC Securities or in other subcombinations of the related MX Classes. Each subcombination 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. See the example under *"Description of the Securities — Modification and Exchange"* in the Base Offering Circular.

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 and 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 GNMAExchange@wellsfargo.com or in writing at its Corporate Trust Office at 150 East 42nd Street, 40th Floor, New York, NY 10017, Attention: Trust Administration Ginnie Mae 2019-103. The Trustee may be contacted by telephone at (917) 260-1522 and by fax at (917) 260-1594.

A fee will be payable to the Trustee in connection with each exchange equal to  $\frac{1}{32}$  of 1% of the outstanding principal (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 2, 6 and 7 Securities that are backed by Underlying Certificates 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 2, 6 and 7 securities that are backed by underlying certificates”* in this Supplement.

### **Accretion Directed Classes**

Classes CF, GV, HE, HM, HN, HY, JV, LA, LY, MV, NV, PA, PB, VG, VM, VN and ZJ are Accretion Directed Classes. The related Accrual Amounts will be applied to making principal distributions on those Classes as described in this Supplement. Each of Classes CS and HI is a Notional Class whose Class Notional Balance is determined by reference to the Class Principal Balance of the related Accretion Directed Class or Classes 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. Each of Classes GV, JV, MV, NV, VG, VM and VN will have principal payment stability only through the prepayment rate shown in the table below. 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 prepayment rate significantly higher than 0% PSA, except within any applicable Effective Ranges.

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 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 GV, JV, MV, NV, VG, VM 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>Classes</u>	<u>Maximum Weighted Average Life (in Years)<sup>(1)</sup></u>	<u>Final Distribution Date</u>	<u>Prepayment Rate at or below</u>
<b>Security Group 3</b>			
JV .....	7.0	August 2032	147% PSA
<b>Security Group 4</b>			
GV .....	6.0	November 2030	204% PSA
MV .....	6.0	November 2030	202% PSA
NV .....	6.0	November 2030	202% PSA
VG .....	16.0	December 2039	70% PSA
VM .....	16.0	December 2039	69% PSA
VN .....	16.0	December 2039	70% 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 any Accretion Directed Class, the Class Principal Balance of that 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 may differ from the Structuring Range used to create the related principal balance schedule. Based on the Modeling Assumptions, the *initial* Effective Ranges for the PAC Classes are as follows:

<u>Security Group</u>	<u>PAC Classes</u>	<u>Initial Effective Ranges</u>
5	LA and LY (in the aggregate) .....	150% PSA through 300% PSA
6	HE, HN, HY and ZJ (in the aggregate) .....	250% PSA through 500% PSA
7	CF, PA and PB (in the aggregate) .....	125% PSA through 230% PSA
8	PF .....	100% PSA through 300% PSA

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

**If the Support Class supporting a given PAC Class is retired before the PAC Class is retired, the outstanding PAC 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 Ranges. If the initial Effective Ranges were calculated using the actual characteristics of the related Mortgage Loans, the initial Effective Ranges could differ from those 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**

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, 3, 4, 5 and 8 Trust Assets and the Subgroup 2C, 6A and 7C Trust Assets have the assumed characteristics shown under “Assumed Characteristics of the Mortgage Loans Underlying the Group 1, 3, 4, 5 and 8 Trust Assets and the Subgroup 2C, 6A and 7C 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, 3, 4, 5 or 8 Trust Asset or a Subgroup 2C, 6A or 7C Trust Asset is assumed to have an original and a remaining term to maturity of 360 months and 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 September 2019.

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

5. The Closing Date for the Securities is August 30, 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	Classes A, F and S					Classes AB, FA and SA					Classes AC, FB and SB				
	0%	100%	200%	300%	400%	0%	100%	200%	300%	400%	0%	100%	200%	300%	400%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	99	97	95	93	92	99	97	95	93	92	99	97	95	94	92
August 2021	97	91	86	81	76	97	91	86	80	75	97	91	86	81	77
August 2022	96	84	74	65	57	96	84	74	65	56	96	85	75	66	58
August 2023	94	78	64	52	42	94	77	64	52	42	94	78	65	53	43
August 2024	92	71	55	42	31	92	71	55	42	31	92	72	56	43	32
August 2025	91	66	48	34	23	91	65	47	34	23	91	66	48	34	24
August 2026	89	60	41	27	17	89	60	41	27	17	89	60	41	27	18
August 2027	87	55	35	22	13	87	55	35	21	13	87	55	35	22	13
August 2028	85	50	30	17	9	85	50	30	17	9	85	51	30	17	10
August 2029	83	46	26	14	7	83	46	25	14	7	83	46	26	14	7
August 2030	80	42	22	11	5	80	42	22	11	5	80	42	22	11	5
August 2031	78	38	18	9	4	78	38	18	9	4	78	38	19	9	4
August 2032	75	34	16	7	3	75	34	16	7	3	75	34	16	7	3
August 2033	72	31	13	5	2	72	31	13	5	2	72	31	13	5	2
August 2034	69	28	11	4	1	69	28	11	4	1	69	28	11	4	1
August 2035	66	25	9	3	1	66	25	9	3	1	66	25	9	3	1
August 2036	63	22	8	3	1	63	22	8	2	1	63	22	8	3	1
August 2037	60	19	6	2	1	60	19	6	2	1	60	20	6	2	1
August 2038	56	17	5	1	0	56	17	5	1	0	56	17	5	2	0
August 2039	52	15	4	1	0	52	15	4	1	0	52	15	4	1	0
August 2040	48	13	3	1	0	48	13	3	1	0	48	13	4	1	0
August 2041	44	11	3	1	0	44	11	3	1	0	44	11	3	1	0
August 2042	40	9	2	0	0	40	9	2	0	0	40	9	2	0	0
August 2043	35	7	2	0	0	35	7	2	0	0	35	8	2	0	0
August 2044	30	6	1	0	0	30	6	1	0	0	30	6	1	0	0
August 2045	24	4	1	0	0	24	4	1	0	0	24	5	1	0	0
August 2046	19	3	1	0	0	19	3	1	0	0	19	3	1	0	0
August 2047	13	2	0	0	0	13	2	0	0	0	13	2	0	0	0
August 2048	7	1	0	0	0	7	1	0	0	0	7	1	0	0	0
August 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	19.0	10.8	7.3	5.5	4.4	19.0	10.7	7.3	5.4	4.4	19.0	10.8	7.4	5.5	4.4

Security Group 2 PSA Prepayment Assumption Rates															
Distribution Date	Classes AI and BC					Class B					Classes BA, FD and SD				
	0%	300%	621%	950%	1,300%	0%	300%	621%	950%	1,300%	0%	300%	621%	950%	1,300%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	98	91	83	74	65	99	91	83	75	66	98	90	80	70	59
August 2021	97	76	56	38	22	97	76	57	40	24	97	74	53	34	18
August 2022	95	61	35	16	5	95	62	35	17	5	95	60	32	14	4
August 2023	93	49	21	7	1	94	50	22	7	1	93	48	20	6	1
August 2024	91	40	13	3	0	92	40	13	3	0	91	39	12	3	0
August 2025	89	32	8	1	0	90	32	8	1	0	89	31	8	1	0
August 2026	87	25	5	1	0	88	26	5	1	0	87	25	5	0	0
August 2027	85	20	3	0	0	86	20	3	0	0	85	20	3	0	0
August 2028	83	16	2	0	0	84	16	2	0	0	83	16	2	0	0
August 2029	80	13	1	0	0	81	13	1	0	0	80	13	1	0	0
August 2030	78	10	1	0	0	79	10	1	0	0	78	10	1	0	0
August 2031	75	8	0	0	0	76	8	0	0	0	75	8	0	0	0
August 2032	72	6	0	0	0	73	6	0	0	0	72	6	0	0	0
August 2033	69	5	0	0	0	71	5	0	0	0	69	5	0	0	0
August 2034	66	4	0	0	0	67	4	0	0	0	66	4	0	0	0
August 2035	63	3	0	0	0	64	3	0	0	0	63	3	0	0	0
August 2036	59	2	0	0	0	61	2	0	0	0	59	2	0	0	0
August 2037	56	2	0	0	0	57	2	0	0	0	56	2	0	0	0
August 2038	52	1	0	0	0	54	1	0	0	0	52	1	0	0	0
August 2039	48	1	0	0	0	50	1	0	0	0	48	1	0	0	0
August 2040	44	1	0	0	0	45	1	0	0	0	44	1	0	0	0
August 2041	39	1	0	0	0	41	1	0	0	0	39	1	0	0	0
August 2042	34	0	0	0	0	36	0	0	0	0	34	0	0	0	0
August 2043	29	0	0	0	0	31	0	0	0	0	30	0	0	0	0
August 2044	24	0	0	0	0	26	0	0	0	0	24	0	0	0	0
August 2045	19	0	0	0	0	21	0	0	0	0	19	0	0	0	0
August 2046	13	0	0	0	0	15	0	0	0	0	13	0	0	0	0
August 2047	7	0	0	0	0	9	0	0	0	0	7	0	0	0	0
August 2048	2	0	0	0	0	3	0	0	0	0	1	0	0	0	0
August 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	18.0	5.2	2.8	1.9	1.4	18.4	5.2	2.8	1.9	1.5	18.0	5.1	2.7	1.8	1.3

**Security Group 2  
PSA Prepayment Assumption Rates**

Distribution Date	Classes BD, FC and SC					Classes FE and SE					Classes FG and SG				
	0%	300%	621%	950%	1,300%	0%	300%	621%	950%	1,300%	0%	300%	621%	950%	1,300%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	99	93	87	80	74	98	92	85	77	69	98	91	82	74	64
August 2021	97	80	62	47	31	97	78	59	42	26	97	76	56	38	22
August 2022	96	64	39	20	7	95	63	37	18	6	95	61	35	16	5
August 2023	95	52	24	8	1	93	50	22	8	1	93	49	21	7	1
August 2024	93	42	15	4	0	92	41	14	3	0	91	40	13	3	0
August 2025	91	33	9	1	0	90	33	8	1	0	89	32	8	1	0
August 2026	90	27	6	1	0	88	26	5	1	0	87	25	5	1	0
August 2027	88	21	3	0	0	85	21	3	0	0	85	20	3	0	0
August 2028	86	17	2	0	0	83	17	2	0	0	83	16	2	0	0
August 2029	84	14	1	0	0	81	13	1	0	0	81	13	1	0	0
August 2030	81	11	1	0	0	78	11	1	0	0	78	10	1	0	0
August 2031	79	9	0	0	0	76	8	0	0	0	75	8	0	0	0
August 2032	77	7	0	0	0	73	7	0	0	0	72	6	0	0	0
August 2033	74	5	0	0	0	70	5	0	0	0	70	5	0	0	0
August 2034	71	4	0	0	0	67	4	0	0	0	66	4	0	0	0
August 2035	68	3	0	0	0	64	3	0	0	0	63	3	0	0	0
August 2036	65	3	0	0	0	60	2	0	0	0	60	2	0	0	0
August 2037	61	2	0	0	0	57	2	0	0	0	56	2	0	0	0
August 2038	58	1	0	0	0	53	1	0	0	0	52	1	0	0	0
August 2039	54	1	0	0	0	49	1	0	0	0	48	1	0	0	0
August 2040	50	1	0	0	0	45	1	0	0	0	44	1	0	0	0
August 2041	46	1	0	0	0	41	1	0	0	0	40	1	0	0	0
August 2042	41	0	0	0	0	36	0	0	0	0	35	0	0	0	0
August 2043	36	0	0	0	0	31	0	0	0	0	30	0	0	0	0
August 2044	31	0	0	0	0	26	0	0	0	0	25	0	0	0	0
August 2045	26	0	0	0	0	21	0	0	0	0	20	0	0	0	0
August 2046	20	0	0	0	0	15	0	0	0	0	14	0	0	0	0
August 2047	14	0	0	0	0	9	0	0	0	0	8	0	0	0	0
August 2048	7	0	0	0	0	3	0	0	0	0	2	0	0	0	0
August 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average															
Life (years)	19.3	5.4	3.0	2.1	1.6	18.3	5.3	2.9	2.0	1.5	18.1	5.2	2.8	1.9	1.4

**Security Group 3  
PSA Prepayment Assumption Rates**

Distribution Date	Class JA					Class JB					Class JC				
	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	96	87	80	72	65	100	100	100	100	100	100	100	100	100	100
August 2021	91	65	41	19	0	100	100	100	100	99	100	100	100	100	98
August 2022	86	37	0	0	0	100	100	98	79	62	100	100	97	67	42
August 2023	81	12	0	0	0	100	100	79	56	39	100	100	67	32	5
August 2024	76	0	0	0	0	100	94	63	40	24	100	91	42	7	0
August 2025	70	0	0	0	0	100	84	50	29	15	100	75	23	0	0
August 2026	64	0	0	0	0	100	74	40	20	10	100	60	7	0	0
August 2027	58	0	0	0	0	100	66	32	14	6	100	47	0	0	0
August 2028	52	0	0	0	0	100	58	26	10	4	100	35	0	0	0
August 2029	45	0	0	0	0	100	51	20	7	2	100	24	0	0	0
August 2030	38	0	0	0	0	100	45	16	5	1	100	15	0	0	0
August 2031	30	0	0	0	0	100	39	13	4	1	100	6	0	0	0
August 2032	22	0	0	0	0	100	34	10	3	1	100	0	0	0	0
August 2033	14	0	0	0	0	100	30	8	2	0	100	0	0	0	0
August 2034	5	0	0	0	0	100	26	6	1	0	100	0	0	0	0
August 2035	0	0	0	0	0	98	22	5	1	0	97	0	0	0	0
August 2036	0	0	0	0	0	93	19	4	1	0	89	0	0	0	0
August 2037	0	0	0	0	0	88	16	3	0	0	81	0	0	0	0
August 2038	0	0	0	0	0	82	14	2	0	0	75	0	0	0	0
August 2039	0	0	0	0	0	77	12	2	0	0	64	0	0	0	0
August 2040	0	0	0	0	0	71	10	1	0	0	54	0	0	0	0
August 2041	0	0	0	0	0	64	8	1	0	0	44	0	0	0	0
August 2042	0	0	0	0	0	58	6	1	0	0	34	0	0	0	0
August 2043	0	0	0	0	0	50	5	0	0	0	23	0	0	0	0
August 2044	0	0	0	0	0	43	4	0	0	0	12	0	0	0	0
August 2045	0	0	0	0	0	35	3	0	0	0	0	0	0	0	0
August 2046	0	0	0	0	0	27	2	0	0	0	0	0	0	0	0
August 2047	0	0	0	0	0	19	1	0	0	0	0	0	0	0	0
August 2048	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0
August 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average															
Life (years)	8.8	2.5	1.7	1.4	1.2	23.7	11.8	7.3	5.3	4.1	21.2	8.0	4.9	3.6	2.9

**Security Group 3  
PSA Prepayment Assumption Rates**

Distribution Date	Class JD					Class JV					Class JZ				
	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	100	100	100	100	100	94	94	94	94	94	104	104	104	104	104
August 2021	100	100	100	100	100	87	87	87	87	87	107	107	107	107	107
August 2022	100	100	100	100	100	81	81	81	81	81	111	111	111	111	111
August 2023	100	100	100	100	100	74	74	74	74	74	115	115	115	115	115
August 2024	100	100	100	100	69	67	67	67	67	0	119	119	119	119	108
August 2025	100	100	100	81	43	59	59	59	6	0	123	123	123	123	68
August 2026	100	100	100	57	27	52	52	52	0	0	128	128	128	90	42
August 2027	100	100	90	41	17	44	44	17	0	0	132	132	132	64	26
August 2028	100	100	72	29	10	36	36	0	0	0	137	137	113	45	16
August 2029	100	100	57	20	6	27	27	0	0	0	142	142	90	32	10
August 2030	100	100	45	14	4	18	18	0	0	0	147	147	71	23	6
August 2031	100	100	36	10	2	9	9	0	0	0	152	152	56	16	4
August 2032	100	97	28	7	2	0	0	0	0	0	157	153	44	11	2
August 2033	100	84	22	5	1	0	0	0	0	0	157	133	35	8	1
August 2034	100	73	17	3	1	0	0	0	0	0	157	115	27	5	1
August 2035	100	63	13	2	0	0	0	0	0	0	157	100	21	4	1
August 2036	100	54	10	2	0	0	0	0	0	0	157	86	16	3	0
August 2037	100	46	8	1	0	0	0	0	0	0	157	73	13	2	0
August 2038	100	39	6	1	0	0	0	0	0	0	157	62	10	1	0
August 2039	100	33	5	1	0	0	0	0	0	0	157	52	7	1	0
August 2040	100	28	3	0	0	0	0	0	0	0	157	43	5	1	0
August 2041	100	23	3	0	0	0	0	0	0	0	157	36	4	0	0
August 2042	100	18	2	0	0	0	0	0	0	0	157	29	3	0	0
August 2043	100	14	1	0	0	0	0	0	0	0	157	23	2	0	0
August 2044	100	11	1	0	0	0	0	0	0	0	157	17	1	0	0
August 2045	99	8	1	0	0	0	0	0	0	0	156	13	1	0	0
August 2046	76	6	0	0	0	0	0	0	0	0	120	9	1	0	0
August 2047	52	3	0	0	0	0	0	0	0	0	82	5	0	0	0
August 2048	27	1	0	0	0	0	0	0	0	0	42	2	0	0	0
August 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	28.1	18.5	11.7	8.3	6.3	7.0	7.0	5.8	4.7	3.9	28.1	18.6	12.4	9.0	6.9

**Security Group 4  
PSA Prepayment Assumption Rates**

Distribution Date	Class G					Class GA					Class GB					Class GC					
	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	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
August 2020	98	93	89	84	80	98	93	88	83	79	100	100	100	100	100	100	100	100	100	100	100
August 2021	95	81	67	54	42	95	80	66	53	40	100	100	100	100	100	100	100	100	100	100	100
August 2022	93	65	42	21	3	93	65	41	20	2	100	100	100	100	100	100	100	100	100	100	100
August 2023	90	51	21	0	0	90	51	20	0	0	100	100	100	94	64	100	100	100	87	26	
August 2024	88	39	4	0	0	88	38	4	0	0	100	100	100	67	40	100	100	100	31	0	
August 2025	85	27	0	0	0	85	27	0	0	0	100	100	85	48	25	100	100	68	0	0	
August 2026	82	17	0	0	0	82	17	0	0	0	100	100	68	34	16	100	100	33	0	0	
August 2027	78	8	0	0	0	78	8	0	0	0	100	100	54	24	10	100	100	4	0	0	
August 2028	75	0	0	0	0	75	0	0	0	0	100	99	43	17	6	100	98	0	0	0	
August 2029	71	0	0	0	0	71	0	0	0	0	100	88	34	12	4	100	74	0	0	0	
August 2030	68	0	0	0	0	68	0	0	0	0	100	77	27	9	2	100	52	0	0	0	
August 2031	64	0	0	0	0	64	0	0	0	0	100	68	22	6	1	100	33	0	0	0	
August 2032	59	0	0	0	0	59	0	0	0	0	100	59	17	4	1	100	15	0	0	0	
August 2033	55	0	0	0	0	55	0	0	0	0	100	52	13	3	1	100	0	0	0	0	
August 2034	50	0	0	0	0	50	0	0	0	0	100	45	10	2	0	100	0	0	0	0	
August 2035	45	0	0	0	0	45	0	0	0	0	100	39	8	1	0	100	0	0	0	0	
August 2036	40	0	0	0	0	40	0	0	0	0	100	33	6	1	0	100	0	0	0	0	
August 2037	34	0	0	0	0	34	0	0	0	0	100	29	5	1	0	100	0	0	0	0	
August 2038	28	0	0	0	0	28	0	0	0	0	100	24	4	0	0	100	0	0	0	0	
August 2039	22	0	0	0	0	22	0	0	0	0	100	20	3	0	0	100	0	0	0	0	
August 2040	15	0	0	0	0	15	0	0	0	0	100	17	2	0	0	100	0	0	0	0	
August 2041	8	0	0	0	0	8	0	0	0	0	100	14	2	0	0	100	0	0	0	0	
August 2042	1	0	0	0	0	1	0	0	0	0	100	11	1	0	0	100	0	0	0	0	
August 2043	0	0	0	0	0	0	0	0	0	0	89	9	1	0	0	77	0	0	0	0	
August 2044	0	0	0	0	0	0	0	0	0	0	76	7	1	0	0	50	0	0	0	0	
August 2045	0	0	0	0	0	0	0	0	0	0	63	5	0	0	0	22	0	0	0	0	
August 2046	0	0	0	0	0	0	0	0	0	0	48	3	0	0	0	0	0	0	0	0	
August 2047	0	0	0	0	0	0	0	0	0	0	33	2	0	0	0	0	0	0	0	0	
August 2048	0	0	0	0	0	0	0	0	0	0	17	1	0	0	0	0	0	0	0	0	
August 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)	14.0	4.3	2.7	2.1	1.8	14.0	4.3	2.7	2.1	1.7	26.8	15.5	9.6	6.8	5.2	25.0	11.2	6.6	4.7	3.7	

**Security Group 4  
PSA Prepayment Assumption Rates**

Distribution Date	Class GD					Class GI					Class GV					Class GZ				
	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	100	100	100	100	100	99	96	93	90	87	93	93	93	93	93	104	104	104	104	104
August 2021	100	100	100	100	100	97	88	79	71	63	85	85	85	85	85	107	107	107	107	107
August 2022	100	100	100	100	100	96	79	64	51	40	77	77	77	77	77	111	111	111	111	111
August 2023	100	100	100	100	100	94	70	51	37	25	69	69	69	69	69	115	115	115	115	115
August 2024	100	100	100	100	77	92	62	41	26	16	60	60	60	60	0	119	119	119	119	119
August 2025	100	100	100	92	48	91	55	33	19	10	51	51	51	17	0	123	123	123	123	98
August 2026	100	100	100	65	30	89	49	26	13	6	42	42	42	0	0	128	128	128	128	61
August 2027	100	100	100	47	19	87	44	21	9	4	33	33	33	0	0	132	132	132	94	38
August 2028	100	100	83	33	12	85	39	17	7	2	23	23	0	0	0	137	137	137	67	24
August 2029	100	100	66	23	7	83	34	13	5	1	13	13	0	0	0	142	142	134	47	15
August 2030	100	100	52	17	5	80	30	11	3	1	2	2	0	0	0	147	147	106	34	9
August 2031	100	100	41	12	3	78	26	8	2	1	0	0	0	0	0	152	152	84	24	6
August 2032	100	100	33	8	2	75	23	7	2	0	0	0	0	0	0	158	158	66	17	3
August 2033	100	99	26	6	1	72	20	5	1	0	0	0	0	0	0	163	163	52	12	2
August 2034	100	86	20	4	1	69	18	4	1	0	0	0	0	0	0	169	169	41	8	1
August 2035	100	75	16	3	0	66	15	3	1	0	0	0	0	0	0	175	151	32	6	1
August 2036	100	64	12	2	0	63	13	2	0	0	0	0	0	0	0	181	130	25	4	0
August 2037	100	55	9	1	0	60	11	2	0	0	0	0	0	0	0	188	111	19	3	0
August 2038	100	47	7	1	0	56	9	1	0	0	0	0	0	0	0	194	95	15	2	0
August 2039	100	39	5	1	0	52	8	1	0	0	0	0	0	0	0	201	80	11	1	0
August 2040	100	33	4	0	0	48	7	1	0	0	0	0	0	0	0	203	66	8	1	0
August 2041	100	27	3	0	0	44	5	1	0	0	0	0	0	0	0	203	54	6	1	0
August 2042	100	22	2	0	0	40	4	0	0	0	0	0	0	0	0	203	44	4	0	0
August 2043	100	17	2	0	0	35	3	0	0	0	0	0	0	0	0	203	35	3	0	0
August 2044	100	13	1	0	0	30	3	0	0	0	0	0	0	0	0	203	26	2	0	0
August 2045	100	9	1	0	0	24	2	0	0	0	0	0	0	0	0	203	19	1	0	0
August 2046	93	6	0	0	0	19	1	0	0	0	0	0	0	0	0	188	13	1	0	0
August 2047	63	4	0	0	0	13	1	0	0	0	0	0	0	0	0	129	7	0	0	0
August 2048	33	1	0	0	0	7	0	0	0	0	0	0	0	0	0	66	3	0	0	0
August 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)	28.4	19.5	12.4	8.7	6.6	19.0	8.7	5.4	3.9	3.1	6.0	6.0	5.6	4.6	3.8	28.4	20.4	13.9	10.0	7.7

**PSA Prepayment Assumption Rates**

Distribution Date	Class KB					Class KC					Class KD					Class KV				
	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	93	93	93	93	93
August 2021	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	85	85	85	85	85
August 2022	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	77	77	77	77	77
August 2023	100	100	100	95	65	100	100	100	90	27	100	100	100	100	100	69	69	69	69	69
August 2024	100	100	100	68	41	100	100	100	32	0	100	100	100	100	78	60	60	60	60	0
August 2025	100	100	86	48	26	100	100	69	0	0	100	100	100	92	49	51	51	51	17	0
August 2026	100	100	68	35	16	100	100	33	0	0	100	100	100	65	30	42	42	42	0	0
August 2027	100	100	55	25	10	100	100	4	0	0	100	100	100	47	19	33	33	33	0	0
August 2028	100	100	44	17	6	100	99	0	0	0	100	100	83	33	12	23	23	0	0	0
August 2029	100	88	35	12	4	100	74	0	0	0	100	100	66	23	7	13	13	0	0	0
August 2030	100	77	28	9	2	100	52	0	0	0	100	100	52	17	5	2	2	0	0	0
August 2031	100	68	22	6	1	100	32	0	0	0	100	100	41	12	3	0	0	0	0	0
August 2032	100	60	17	4	1	100	14	0	0	0	100	100	33	8	2	0	0	0	0	0
August 2033	100	52	14	3	1	100	0	0	0	0	100	99	26	6	1	0	0	0	0	0
August 2034	100	45	11	2	0	100	0	0	0	0	100	86	20	4	1	0	0	0	0	0
August 2035	100	39	8	1	0	100	0	0	0	0	100	74	16	3	0	0	0	0	0	0
August 2036	100	34	6	1	0	100	0	0	0	0	100	64	12	2	0	0	0	0	0	0
August 2037	100	29	5	1	0	100	0	0	0	0	100	55	9	1	0	0	0	0	0	0
August 2038	100	24	4	0	0	100	0	0	0	0	100	46	7	1	0	0	0	0	0	0
August 2039	100	21	3	0	0	100	0	0	0	0	100	39	5	1	0	0	0	0	0	0
August 2040	100	17	2	0	0	100	0	0	0	0	100	33	4	0	0	0	0	0	0	0
August 2041	100	14	2	0	0	100	0	0	0	0	100	27	3	0	0	0	0	0	0	0
August 2042	100	11	1	0	0	100	0	0	0	0	100	22	2	0	0	0	0	0	0	0
August 2043	89	9	1	0	0	77	0	0	0	0	100	17	2	0	0	0	0	0	0	0
August 2044	76	7	1	0	0	50	0	0	0	0	100	13	1	0	0	0	0	0	0	0
August 2045	63	5	0	0	0	21	0	0	0	0	100	10	1	0	0	0	0	0	0	0
August 2046	48	3	0	0	0	0	0	0	0	0	91	7	0	0	0	0	0	0	0	0
August 2047	33	2	0	0	0	0	0	0	0	0	63	4	0	0	0	0	0	0	0	0
August 2048	17	1	0	0	0	0	0	0	0	0	32	1	0	0	0	0	0	0	0	0
August 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)	26.8	15.6	9.6	6.8	5.2	25.0	11.2	6.6	4.7	3.7	28.4	19.5	12.3	8.7	6.6	6.0	6.0	5.6	4.6	3.8

**Security Group 4  
PSA Prepayment Assumption Rates**

Distribution Date	Class KZ					Class MA					Class MB					Class MC				
	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	104	104	104	104	104	98	93	89	85	81	100	100	100	100	100	100	100	100	100	100
August 2021	107	107	107	107	107	95	81	68	55	43	100	100	100	100	100	100	100	100	100	100
August 2022	111	111	111	111	111	93	66	43	22	4	100	100	100	100	100	100	100	100	100	100
August 2023	115	115	115	115	115	90	52	22	0	0	100	100	100	96	67	100	100	100	92	28
August 2024	119	119	119	119	119	88	39	5	0	0	100	100	100	69	42	100	100	100	33	0
August 2025	123	123	123	123	99	85	28	0	0	0	100	100	86	49	26	100	100	70	0	0
August 2026	128	128	128	128	62	82	18	0	0	0	100	100	69	35	16	100	100	33	0	0
August 2027	132	132	132	95	38	78	8	0	0	0	100	100	55	25	10	100	100	4	0	0
August 2028	137	137	137	67	24	75	0	0	0	0	100	100	44	18	6	100	100	0	0	0
August 2029	142	142	133	48	15	71	0	0	0	0	100	88	35	13	4	100	75	0	0	0
August 2030	147	147	106	34	9	68	0	0	0	0	100	78	28	9	2	100	52	0	0	0
August 2031	152	152	84	24	6	64	0	0	0	0	100	68	22	6	2	100	32	0	0	0
August 2032	158	158	66	17	4	59	0	0	0	0	100	60	17	4	1	100	14	0	0	0
August 2033	163	163	52	12	2	55	0	0	0	0	100	52	14	3	1	100	0	0	0	0
August 2034	169	169	41	8	1	50	0	0	0	0	100	46	11	2	0	100	0	0	0	0
August 2035	175	151	32	6	1	45	0	0	0	0	100	39	8	1	0	100	0	0	0	0
August 2036	181	130	25	4	0	40	0	0	0	0	100	34	6	1	0	100	0	0	0	0
August 2037	188	111	19	3	0	34	0	0	0	0	100	29	5	1	0	100	0	0	0	0
August 2038	194	94	15	2	0	28	0	0	0	0	100	25	4	0	0	100	0	0	0	0
August 2039	201	79	11	1	0	22	0	0	0	0	100	21	3	0	0	100	0	0	0	0
August 2040	203	66	8	1	0	15	0	0	0	0	100	17	2	0	0	100	0	0	0	0
August 2041	203	54	6	1	0	8	0	0	0	0	100	14	2	0	0	100	0	0	0	0
August 2042	203	44	4	0	0	1	0	0	0	0	100	12	1	0	0	100	0	0	0	0
August 2043	203	35	3	0	0	0	0	0	0	0	89	9	1	0	0	77	0	0	0	0
August 2044	203	27	2	0	0	0	0	0	0	0	76	7	1	0	0	49	0	0	0	0
August 2045	203	20	1	0	0	0	0	0	0	0	63	5	0	0	0	20	0	0	0	0
August 2046	186	13	1	0	0	0	0	0	0	0	48	4	0	0	0	0	0	0	0	0
August 2047	127	8	0	0	0	0	0	0	0	0	33	2	0	0	0	0	0	0	0	0
August 2048	65	3	0	0	0	0	0	0	0	0	17	1	0	0	0	0	0	0	0	0
August 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)	28.4	20.4	13.9	10.0	7.7	14.0	4.4	2.8	2.1	1.8	26.8	15.6	9.7	6.8	5.3	24.9	11.2	6.6	4.7	3.7

**PSA Prepayment Assumption Rates**

Distribution Date	Class MD					Class MI					Class MV					Class MZ				
	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	100	100	100	100	100	99	96	93	91	88	93	93	93	93	93	104	104	104	104	104
August 2021	100	100	100	100	100	97	88	80	73	65	85	85	85	85	85	107	107	107	107	107
August 2022	100	100	100	100	100	96	79	65	52	41	77	77	77	77	77	111	111	111	111	111
August 2023	100	100	100	100	100	94	71	52	38	26	69	69	69	69	69	115	115	115	115	115
August 2024	100	100	100	100	78	92	63	42	27	16	60	60	60	60	0	119	119	119	119	119
August 2025	100	100	100	92	49	91	56	34	19	10	51	51	51	17	0	123	123	123	123	99
August 2026	100	100	100	65	31	89	50	27	14	6	42	42	42	0	0	128	128	128	128	62
August 2027	100	100	100	47	19	87	44	22	10	4	33	33	33	0	0	132	132	132	94	39
August 2028	100	100	82	33	12	85	39	17	7	2	23	23	0	0	0	137	137	137	67	24
August 2029	100	100	65	23	7	83	34	14	5	2	13	13	0	0	0	142	142	133	47	15
August 2030	100	100	52	17	5	80	30	11	3	1	2	2	0	0	0	147	147	105	34	9
August 2031	100	100	41	12	3	78	27	9	2	1	0	0	0	0	0	152	152	83	24	6
August 2032	100	100	32	8	2	75	23	7	2	0	0	0	0	0	0	158	158	66	17	4
August 2033	100	98	26	6	1	72	20	5	1	0	0	0	0	0	0	163	163	52	12	2
August 2034	100	85	20	4	1	69	18	4	1	0	0	0	0	0	0	169	169	41	8	1
August 2035	100	74	16	3	0	66	15	3	1	0	0	0	0	0	0	175	149	32	6	1
August 2036	100	63	12	2	0	63	13	3	0	0	0	0	0	0	0	181	129	25	4	0
August 2037	100	54	9	1	0	60	11	2	0	0	0	0	0	0	0	188	110	19	3	0
August 2038	100	46	7	1	0	56	10	1	0	0	0	0	0	0	0	194	94	15	2	0
August 2039	100	39	5	1	0	52	8	1	0	0	0	0	0	0	0	201	79	11	1	0
August 2040	100	33	4	0	0	48	7	1	0	0	0	0	0	0	0	203	66	8	1	0
August 2041	100	27	3	0	0	44	6	1	0	0	0	0	0	0	0	203	54	6	1	0
August 2042	100	22	2	0	0	40	5	0	0	0	0	0	0	0	0	203	44	5	0	0
August 2043	100	17	2	0	0	35	4	0	0	0	0	0	0	0	0	203	35	3	0	0
August 2044	100	13	1	0	0	30	3	0	0	0	0	0	0	0	0	203	27	2	0	0
August 2045	100	10	1	0	0	24	2	0	0	0	0	0	0	0	0	203	20	1	0	0
August 2046	90	7	0	0	0	19	1	0	0	0	0	0	0	0	0	183	14	1	0	0
August 2047	62	4	0	0	0	13	1	0	0	0	0	0	0	0	0	125	8	1	0	0
August 2048	32	2	0	0	0	7	0	0	0	0	0	0	0	0	0	64	3	0	0	0
August 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)	28.4	19.4	12.3	8.7	6.6	19.0	8.8	5.5	4.0	3.2	6.0	6.0	5.5	4.6	3.8	28.4	20.4	13.8	10.0	7.7

**Security Group 4  
PSA Prepayment Assumption Rates**

Distribution Date	Class NA					Class NB					Class NC					Class ND				
	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	98	93	89	85	81	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2021	95	81	68	55	43	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2022	93	66	43	22	4	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2023	90	52	22	0	0	100	100	100	96	67	100	100	100	92	29	100	100	100	100	100
August 2024	88	39	5	0	0	100	100	100	69	42	100	100	100	33	0	100	100	100	100	78
August 2025	85	28	0	0	0	100	100	86	49	26	100	100	70	0	0	100	100	100	92	49
August 2026	82	18	0	0	0	100	100	69	35	16	100	100	34	0	0	100	100	100	66	31
August 2027	78	8	0	0	0	100	100	55	25	10	100	100	4	0	0	100	100	100	47	19
August 2028	75	0	0	0	0	100	100	44	18	6	100	100	0	0	0	100	100	82	33	12
August 2029	71	0	0	0	0	100	88	35	13	4	100	75	0	0	0	100	100	66	23	7
August 2030	68	0	0	0	0	100	78	28	9	2	100	52	0	0	0	100	100	52	17	5
August 2031	64	0	0	0	0	100	68	22	6	2	100	32	0	0	0	100	100	41	12	3
August 2032	59	0	0	0	0	100	60	17	4	1	100	14	0	0	0	100	100	33	8	2
August 2033	55	0	0	0	0	100	52	14	3	1	100	0	0	0	0	100	98	26	6	1
August 2034	50	0	0	0	0	100	45	11	2	0	100	0	0	0	0	100	85	20	4	1
August 2035	45	0	0	0	0	100	39	8	1	0	100	0	0	0	0	100	74	16	3	0
August 2036	40	0	0	0	0	100	34	6	1	0	100	0	0	0	0	100	64	12	2	0
August 2037	34	0	0	0	0	100	29	5	1	0	100	0	0	0	0	100	54	9	1	0
August 2038	28	0	0	0	0	100	25	4	0	0	100	0	0	0	0	100	46	7	1	0
August 2039	22	0	0	0	0	100	21	3	0	0	100	0	0	0	0	100	39	5	1	0
August 2040	15	0	0	0	0	100	17	2	0	0	100	0	0	0	0	100	33	4	0	0
August 2041	8	0	0	0	0	100	14	2	0	0	100	0	0	0	0	100	27	3	0	0
August 2042	1	0	0	0	0	100	12	1	0	0	100	0	0	0	0	100	22	2	0	0
August 2043	0	0	0	0	0	89	9	1	0	0	77	0	0	0	0	100	17	2	0	0
August 2044	0	0	0	0	0	76	7	1	0	0	49	0	0	0	0	100	13	1	0	0
August 2045	0	0	0	0	0	63	5	0	0	0	20	0	0	0	0	100	10	1	0	0
August 2046	0	0	0	0	0	48	4	0	0	0	0	0	0	0	0	91	7	0	0	0
August 2047	0	0	0	0	0	33	2	0	0	0	0	0	0	0	0	62	4	0	0	0
August 2048	0	0	0	0	0	17	1	0	0	0	0	0	0	0	0	32	2	0	0	0
August 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)	14.0	4.4	2.8	2.1	1.8	26.8	15.6	9.7	6.8	5.3	25.0	11.2	6.6	4.7	3.7	28.4	19.5	12.3	8.7	6.6

**PSA Prepayment Assumption Rates**

Distribution Date	Class NI					Class NV					Class NZ					Class VG				
	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	99	96	93	91	88	93	93	93	93	93	104	104	104	104	104	100	100	100	100	100
August 2021	97	88	80	73	65	85	85	85	85	85	107	107	107	107	107	100	100	100	100	100
August 2022	96	79	65	52	41	77	77	77	77	77	111	111	111	111	111	100	100	100	100	100
August 2023	94	71	52	38	26	69	69	69	69	69	115	115	115	115	115	100	100	100	100	100
August 2024	92	63	42	27	16	60	60	60	60	0	119	119	119	119	119	100	100	100	100	69
August 2025	91	56	34	19	10	51	51	51	18	0	123	123	123	123	99	100	100	100	100	0
August 2026	89	50	27	14	6	42	42	42	0	0	128	128	128	128	62	100	100	100	9	0
August 2027	87	44	21	10	4	33	33	33	0	0	132	132	132	95	39	100	100	100	0	0
August 2028	85	39	17	7	2	23	23	0	0	0	137	137	137	67	24	100	100	57	0	0
August 2029	83	34	14	5	2	13	13	0	0	0	142	142	133	48	15	100	100	0	0	0
August 2030	80	30	11	3	1	2	2	0	0	0	147	147	106	34	9	100	100	0	0	0
August 2031	78	27	9	2	1	0	0	0	0	0	152	152	84	24	6	93	93	0	0	0
August 2032	75	23	7	2	0	0	0	0	0	0	158	158	66	17	4	83	83	0	0	0
August 2033	72	20	5	1	0	0	0	0	0	0	163	163	52	12	2	73	70	0	0	0
August 2034	69	18	4	1	0	0	0	0	0	0	169	169	41	8	1	62	11	0	0	0
August 2035	66	15	3	1	0	0	0	0	0	0	175	150	32	6	1	51	0	0	0	0
August 2036	63	13	3	0	0	0	0	0	0	0	181	129	25	4	0	40	0	0	0	0
August 2037	60	11	2	0	0	0	0	0	0	0	188	111	19	3	0	28	0	0	0	0
August 2038	56	10	1	0	0	0	0	0	0	0	194	94	15	2	0	16	0	0	0	0
August 2039	52	8	1	0	0	0	0	0	0	0	201	79	11	1	0	3	0	0	0	0
August 2040	48	7	1	0	0	0	0	0	0	0	203	66	8	1	0	0	0	0	0	0
August 2041	44	6	1	0	0	0	0	0	0	0	203	55	6	1	0	0	0	0	0	0
August 2042	40	5	0	0	0	0	0	0	0	0	203	44	5	0	0	0	0	0	0	0
August 2043	35	4	0	0	0	0	0	0	0	0	203	35	3	0	0	0	0	0	0	0
August 2044	30	3	0	0	0	0	0	0	0	0	203	27	2	0	0	0	0	0	0	0
August 2045	24	2	0	0	0	0	0	0	0	0	203	20	1	0	0	0	0	0	0	0
August 2046	19	1	0	0	0	0	0	0	0	0	184	14	1	0	0	0	0	0	0	0
August 2047	13	1	0	0	0	0	0	0	0	0	126	8	1	0	0	0	0	0	0	0
August 2048	7	0	0	0	0	0	0	0	0	0	65	3	0	0	0	0	0	0	0	0
August 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)	19.0	8.7	5.5	4.0	3.2	6.0	6.0	5.5	4.6	3.8	28.4	20.4	13.9	10.0	7.7	16.0	14.0	9.1	6.6	5.2

**Security Group 4  
PSA Prepayment Assumption Rates**

Distribution Date	Class VK					Class VM					Class VN				
	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%	0%	150%	300%	450%	600%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2021	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2022	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2023	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2024	100	100	100	100	71	100	100	100	100	72	100	100	100	100	73
August 2025	100	100	100	100	0	100	100	100	100	0	100	100	100	100	0
August 2026	100	100	100	9	0	100	100	100	9	0	100	100	100	10	0
August 2027	100	100	100	0	0	100	100	100	0	0	100	100	100	0	0
August 2028	100	100	56	0	0	100	100	54	0	0	100	100	55	0	0
August 2029	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0
August 2030	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0
August 2031	93	93	0	0	0	93	93	0	0	0	93	93	0	0	0
August 2032	83	83	0	0	0	83	83	0	0	0	83	83	0	0	0
August 2033	73	67	0	0	0	73	64	0	0	0	73	65	0	0	0
August 2034	62	9	0	0	0	62	7	0	0	0	62	8	0	0	0
August 2035	51	0	0	0	0	51	0	0	0	0	51	0	0	0	0
August 2036	40	0	0	0	0	40	0	0	0	0	40	0	0	0	0
August 2037	28	0	0	0	0	28	0	0	0	0	28	0	0	0	0
August 2038	16	0	0	0	0	16	0	0	0	0	16	0	0	0	0
August 2039	3	0	0	0	0	3	0	0	0	0	3	0	0	0	0
August 2040	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2041	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2042	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2043	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2045	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2046	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2047	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2048	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	16.0	14.0	9.1	6.6	5.2	16.0	14.0	9.1	6.6	5.2	16.0	14.0	9.1	6.6	5.2

**Security Group 5  
PSA Prepayment Assumption Rates**

Distribution Date	Class IA					Class LB					Class LY					Class LZ					
	0%	150%	200%	300%	400%	0%	150%	200%	300%	400%	0%	150%	200%	300%	400%	0%	150%	200%	300%	400%	
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	97	94	94	94	94	97	94	94	94	94	100	100	100	100	100	104	104	99	91	83	
August 2021	94	83	83	83	83	95	85	85	85	85	100	100	100	100	100	107	107	93	65	38	
August 2022	91	70	70	70	67	92	72	72	72	70	100	100	100	100	100	111	111	85	35	0	
August 2023	88	57	57	57	47	89	61	61	61	52	100	100	100	100	100	115	115	79	14	0	
August 2024	85	46	46	46	33	86	51	51	51	39	100	100	100	100	100	119	119	77	4	0	
August 2025	81	36	36	36	22	83	41	41	41	29	100	100	100	100	100	123	123	77	0	0	
August 2026	77	26	26	26	14	79	33	33	33	21	100	100	100	100	100	128	126	77	0	0	
August 2027	73	19	19	19	8	76	26	26	26	16	100	100	100	100	100	132	125	74	0	0	
August 2028	69	13	13	13	3	72	21	21	21	12	100	100	100	100	100	137	121	71	0	0	
August 2029	65	9	9	9	0	68	17	17	17	9	100	100	100	100	98	142	115	66	0	0	
August 2030	61	5	5	5	0	64	13	13	13	6	100	100	100	100	72	147	108	60	0	0	
August 2031	56	2	2	2	0	60	10	10	10	5	100	100	100	100	53	152	100	55	0	0	
August 2032	51	0	0	0	0	55	8	8	8	3	100	94	94	94	39	158	91	49	0	0	
August 2033	46	0	0	0	0	51	6	6	6	2	100	74	74	74	28	163	83	43	0	0	
August 2034	41	0	0	0	0	46	5	5	5	2	100	58	58	58	20	169	74	38	0	0	
August 2035	35	0	0	0	0	41	4	4	4	1	100	45	45	45	15	175	66	33	0	0	
August 2036	29	0	0	0	0	36	3	3	3	1	100	35	35	35	11	181	58	29	0	0	
August 2037	23	0	0	0	0	30	2	2	2	1	100	27	27	27	8	188	51	24	0	0	
August 2038	17	0	0	0	0	24	2	2	2	0	100	21	21	21	5	194	44	21	0	0	
August 2039	10	0	0	0	0	18	1	1	1	0	100	16	16	16	4	201	38	17	0	0	
August 2040	3	0	0	0	0	12	1	1	1	0	100	12	12	12	3	208	32	14	0	0	
August 2041	0	0	0	0	0	5	1	1	1	0	55	9	9	9	2	216	27	12	0	0	
August 2042	0	0	0	0	0	1	1	1	1	0	6	6	6	6	1	211	22	9	0	0	
August 2043	0	0	0	0	0	0	0	0	0	0	4	4	4	4	1	185	18	7	0	0	
August 2044	0	0	0	0	0	0	0	0	0	0	3	3	3	3	1	158	14	5	0	0	
August 2045	0	0	0	0	0	0	0	0	0	0	2	2	2	2	0	130	10	4	0	0	
August 2046	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	100	7	3	0	0	
August 2047	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	68	4	2	0	0	
August 2048	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	2	1	0	0	
August 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)	12.5	5.1	5.1	5.1	4.2	13.3	6.1	6.1	6.1	5.0	22.3	16.6	16.6	16.6	13.1	26.6	17.1	12.6	2.6	1.7	



**Security Group 6  
PSA Prepayment Assumption Rates**

Distribution Date	Classes HA, HB, HC, HD, HE, HG, HP and IH					Class HI					Class HK				
	0%	250%	400%	500%	800%	0%	250%	400%	500%	800%	0%	250%	400%	500%	800%
	Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	97	91	91	91	91	97	92	92	92	92	98	93	93	93	93
August 2021	94	76	76	76	71	94	76	76	76	71	95	79	79	79	75
August 2022	91	58	58	58	36	91	58	58	58	37	92	64	64	64	45
August 2023	88	42	42	42	18	88	42	42	42	19	90	50	50	50	30
August 2024	84	29	29	29	9	85	29	29	29	10	87	38	38	38	22
August 2025	81	20	20	20	5	81	20	20	20	5	84	31	31	31	18
August 2026	77	13	13	13	2	77	14	14	14	2	80	25	25	25	11
August 2027	73	9	9	9	1	73	9	9	9	1	77	21	21	21	6
August 2028	69	6	6	6	0	69	6	6	6	1	73	19	19	19	3
August 2029	65	4	4	4	0	65	4	4	4	0	69	17	17	17	1
August 2030	60	3	3	3	0	60	3	3	3	0	66	16	16	16	1
August 2031	55	2	2	2	0	55	2	2	2	0	61	15	15	15	0
August 2032	50	1	1	1	0	50	1	1	1	0	57	14	14	14	0
August 2033	45	1	1	1	0	45	1	1	1	0	52	10	10	10	0
August 2034	39	0	0	0	0	39	1	1	1	0	48	7	7	7	0
August 2035	33	0	0	0	0	34	0	0	0	0	42	5	5	5	0
August 2036	27	0	0	0	0	27	0	0	0	0	37	4	4	4	0
August 2037	21	0	0	0	0	21	0	0	0	0	31	3	3	3	0
August 2038	14	0	0	0	0	14	0	0	0	0	26	2	2	2	0
August 2039	7	0	0	0	0	7	0	0	0	0	19	1	1	1	0
August 2040	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
August 2041	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
August 2042	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2043	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2045	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2046	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2047	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2048	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	12.2	4.0	4.0	4.0	2.9	12.2	4.1	4.1	4.1	2.9	13.4	5.7	5.7	5.3	3.5

**PSA Prepayment Assumption Rates**

Distribution Date	Class HM					Class HN					Class HY				
	0%	250%	400%	500%	800%	0%	250%	400%	500%	800%	0%	250%	400%	500%	800%
	Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	100	100	100	100	100	97	92	92	92	92	100	100	100	100	100
August 2021	100	100	100	100	100	94	76	76	76	71	100	100	100	100	100
August 2022	100	100	100	100	100	91	58	58	58	37	100	100	100	100	100
August 2023	100	100	100	100	100	88	42	42	42	19	100	100	100	100	100
August 2024	100	100	100	100	100	85	29	29	29	9	100	100	100	100	100
August 2025	100	100	100	100	100	81	20	20	20	5	100	100	100	100	100
August 2026	100	100	100	100	66	77	14	14	14	2	100	100	100	100	100
August 2027	100	100	100	100	33	73	9	9	9	1	100	100	100	100	100
August 2028	100	100	100	100	17	69	6	6	6	1	100	100	100	100	100
August 2029	100	100	100	100	8	65	4	4	4	0	100	100	100	100	91
August 2030	100	100	100	79	4	60	3	3	3	0	100	100	100	100	46
August 2031	100	100	100	54	2	55	2	2	2	0	100	100	100	100	23
August 2032	100	95	95	36	1	50	1	1	1	0	100	100	100	100	12
August 2033	100	70	70	24	0	45	1	1	1	0	100	100	100	100	6
August 2034	100	50	50	16	0	39	1	1	1	0	100	100	100	100	3
August 2035	100	36	36	11	0	34	0	0	0	0	100	100	100	100	1
August 2036	100	26	26	7	0	27	0	0	0	0	100	75	75	75	1
August 2037	100	19	19	5	0	21	0	0	0	0	100	50	50	50	0
August 2038	100	13	13	3	0	14	0	0	0	0	100	32	32	32	0
August 2039	100	9	9	2	0	7	0	0	0	0	100	21	21	21	0
August 2040	6	6	6	1	0	0	0	0	0	0	14	14	14	14	0
August 2041	4	4	4	1	0	0	0	0	0	0	9	9	9	9	0
August 2042	3	3	3	0	0	0	0	0	0	0	5	5	5	5	0
August 2043	2	2	2	0	0	0	0	0	0	0	3	3	3	3	0
August 2044	1	1	1	0	0	0	0	0	0	0	2	2	2	2	0
August 2045	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0
August 2046	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
August 2047	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2048	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	20.7	15.9	15.9	12.9	7.9	12.2	4.1	4.1	4.1	2.9	21.2	18.7	18.7	18.7	11.3

**Security Group 6  
PSA Prepayment Assumption Rates**

Distribution Date	Class HZ					Class ZH					Class ZJ				
	0%	250%	400%	500%	800%	0%	250%	400%	500%	800%	0%	250%	400%	500%	800%
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	104	104	92	84	60	103	103	103	103	103	103	103	103	103	103
August 2021	108	108	71	47	0	106	106	106	106	106	106	106	106	106	106
August 2022	113	113	51	14	0	109	109	109	109	109	109	109	109	109	109
August 2023	117	117	42	1	0	113	113	113	113	113	113	113	113	113	113
August 2024	122	120	40	0	0	116	116	116	116	116	116	116	116	116	116
August 2025	127	116	36	0	0	120	120	120	120	120	120	120	120	120	120
August 2026	132	107	31	0	0	123	123	123	123	123	123	123	123	123	123
August 2027	138	96	26	0	0	127	127	127	127	127	127	127	127	127	127
August 2028	143	84	21	0	0	131	131	131	131	131	131	131	131	131	131
August 2029	149	73	17	0	0	135	135	135	135	135	135	135	135	135	135
August 2030	155	62	13	0	0	139	139	139	139	139	139	139	139	139	139
August 2031	161	53	10	0	0	143	143	143	143	143	143	143	143	143	143
August 2032	168	44	8	0	0	148	148	148	148	148	148	148	148	148	148
August 2033	175	37	6	0	0	152	152	152	152	152	152	152	152	152	152
August 2034	182	30	5	0	0	157	157	157	157	157	157	157	157	157	86
August 2035	189	25	4	0	0	162	162	162	162	162	162	162	162	162	43
August 2036	197	20	3	0	0	166	166	166	166	87	166	166	166	166	21
August 2037	205	16	2	0	0	171	171	171	171	43	171	171	171	171	10
August 2038	214	13	1	0	0	177	177	177	177	21	177	177	177	177	5
August 2039	222	10	1	0	0	182	182	182	182	10	182	182	182	182	2
August 2040	229	8	1	0	0	188	188	188	188	5	188	188	188	188	1
August 2041	209	6	1	0	0	193	193	193	193	2	193	193	193	193	1
August 2042	187	5	0	0	0	199	199	199	199	1	161	161	161	161	0
August 2043	165	4	0	0	0	205	205	205	205	0	98	98	98	98	0
August 2044	141	3	0	0	0	212	212	212	212	0	58	58	58	58	0
August 2045	116	2	0	0	0	218	218	218	137	0	33	33	33	33	0
August 2046	89	1	0	0	0	225	225	225	72	0	17	17	17	17	0
August 2047	61	1	0	0	0	231	231	231	32	0	8	8	8	8	0
August 2048	31	0	0	0	0	99	99	97	10	0	3	3	3	3	0
August 2049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weighted Average Life (years)	25.9	12.3	5.3	2.0	1.1	28.9	28.9	28.9	26.7	17.5	24.5	24.5	24.5	24.5	15.6

**Security Group 7  
PSA Prepayment Assumption Rates**

Distribution Date	Classes CF and CS					Class CL					Class CZ					Classes DA, DB, DC, DE, DG, DH, DI, DJ, DK, DL and ID					
	0%	125%	195%	230%	400%	0%	125%	195%	230%	400%	0%	125%	195%	230%	400%	0%	125%	195%	230%	400%	
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	98	95	95	95	95	100	100	100	100	100	104	104	97	94	79	100	100	100	100	100	100
August 2021	95	88	88	88	88	100	100	100	100	100	107	107	84	73	19	100	100	100	100	100	100
August 2022	93	78	78	78	69	100	100	100	100	100	111	111	66	45	0	100	100	100	100	100	100
August 2023	90	68	68	68	51	100	100	100	100	100	115	115	53	23	0	100	100	100	100	100	100
August 2024	87	59	59	59	38	100	100	100	100	100	119	119	44	10	0	100	100	100	100	100	100
August 2025	84	50	50	50	28	100	100	100	100	90	123	123	39	2	0	100	100	100	100	100	100
August 2026	81	43	43	43	21	100	100	100	100	78	128	128	38	0	0	100	100	100	100	100	100
August 2027	78	36	36	36	15	100	100	100	100	69	132	131	38	0	0	100	100	100	100	100	100
August 2028	75	30	30	30	11	100	100	100	95	68	137	130	37	0	0	100	100	100	100	100	100
August 2029	71	25	25	25	8	100	100	97	86	68	142	128	35	0	0	100	100	100	100	100	100
August 2030	68	21	21	21	6	100	100	88	78	63	147	123	33	0	0	100	100	100	100	100	100
August 2031	64	17	17	17	5	100	100	80	71	55	152	118	31	0	0	100	100	100	100	100	91
August 2032	60	14	14	14	3	100	99	73	68	44	158	111	28	0	0	100	100	100	100	100	71
August 2033	55	12	12	12	2	100	91	68	68	35	163	104	25	0	0	100	100	100	100	100	54
August 2034	51	10	10	10	2	100	84	68	68	28	169	96	23	0	0	100	100	100	100	100	41
August 2035	46	8	8	8	1	100	76	67	67	22	175	88	20	0	0	100	100	100	100	100	30
August 2036	41	7	7	7	1	100	67	63	63	16	181	79	18	0	0	100	100	100	100	100	21
August 2037	36	5	5	5	1	100	58	58	58	11	188	71	16	0	0	100	94	94	94	94	15
August 2038	31	4	4	4	0	100	50	50	50	8	194	63	14	0	0	100	80	80	80	80	11
August 2039	25	3	3	3	0	100	41	41	41	6	201	56	12	0	0	100	63	63	63	63	8
August 2040	20	3	3	3	0	100	34	34	34	4	208	48	10	0	0	100	49	49	49	49	5
August 2041	13	2	2	2	0	100	27	27	27	3	216	42	8	0	0	100	37	37	37	37	4
August 2042	7	2	2	2	0	92	20	20	20	2	223	35	7	0	0	94	28	28	28	28	2
August 2043	1	1	1	1	0	65	15	15	15	1	226	29	5	0	0	94	20	20	20	20	2
August 2044	1	1	1	1	0	50	11	11	11	1	193	23	4	0	0	93	14	14	14	14	1
August 2045	1	1	1	1	0	42	7	7	7	0	159	17	3	0	0	93	10	10	10	10	1
August 2046	0	0	0	0	0	5	4	4	4	0	123	12	2	0	0	7	6	6	6	6	0
August 2047	0	0	0	0	0	2	2	2	2	0	84	8	1	0	0	3	3	3	3	3	0
August 2048	0	0	0	0	0	1	1	1	1	0	43	4	1	0	0	0	0	0	0	0	0
August 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)	14.3	7.3	7.3	7.3	5.0	25.1	19.4	18.3	17.8	12.2	27.1	19.1	8.4	3.0	1.5	26.4	21.6	21.6	21.6	21.6	15.1

**Security Group 7  
PSA Prepayment Assumption Rates**

Distribution Date	Classes EA, EB, EC, ED, EG, EH, EI, EJ, EK, EL and IE					Class GL					Class PA					Class PB					
	0%	125%	195%	230%	400%	0%	125%	195%	230%	400%	0%	125%	195%	230%	400%	0%	125%	195%	230%	400%	
	Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	100	100	100	100	100	100	100	100	100	100	97	95	95	95	95	100	100	100	100	100	100
August 2021	100	100	100	100	100	100	100	100	100	100	95	87	87	87	87	100	100	100	100	100	100
August 2022	100	100	100	100	100	100	100	100	100	100	92	75	75	75	66	100	100	100	100	100	100
August 2023	100	100	100	100	100	100	100	100	100	100	89	65	65	65	47	100	100	100	100	100	100
August 2024	100	100	100	100	100	100	100	100	100	100	86	55	55	55	32	100	100	100	100	100	100
August 2025	100	100	100	100	75	100	100	100	100	88	83	46	46	46	22	100	100	100	100	100	100
August 2026	100	100	100	100	45	100	100	100	100	73	80	37	37	37	14	100	100	100	100	100	100
August 2027	100	100	100	100	22	100	100	100	100	62	76	30	30	30	8	100	100	100	100	100	100
August 2028	100	100	100	88	18	100	100	100	94	60	72	24	24	24	3	100	100	100	100	100	100
August 2029	100	100	92	64	18	100	100	96	83	60	69	18	18	18	0	100	100	100	100	100	100
August 2030	100	100	70	44	18	100	100	85	73	60	65	14	14	14	0	100	100	100	100	100	74
August 2031	100	100	50	27	18	100	100	76	64	55	60	10	10	10	0	100	100	100	100	100	54
August 2032	100	98	33	18	18	100	99	67	60	45	56	7	7	7	0	100	100	100	100	100	39
August 2033	100	78	18	18	18	100	89	60	60	37	51	4	4	4	0	100	100	100	100	100	29
August 2034	100	60	18	18	18	100	80	60	60	30	47	2	2	2	0	100	100	100	100	100	21
August 2035	100	43	18	18	18	100	72	60	60	24	41	0	0	0	0	100	96	96	96	96	15
August 2036	100	27	18	18	13	100	64	60	60	17	36	0	0	0	0	100	78	78	78	78	11
August 2037	100	18	18	18	9	100	57	57	57	12	31	0	0	0	0	100	63	63	63	63	8
August 2038	100	18	18	18	6	100	50	50	50	9	25	0	0	0	0	100	51	51	51	51	5
August 2039	100	18	18	18	5	100	41	41	41	6	19	0	0	0	0	100	41	41	41	41	4
August 2040	100	18	18	18	3	100	34	34	34	4	12	0	0	0	0	100	32	32	32	32	3
August 2041	100	17	17	17	2	100	27	27	27	3	6	0	0	0	0	100	25	25	25	25	2
August 2042	94	13	13	13	1	94	20	20	20	2	0	0	0	0	0	84	19	19	19	19	1
August 2043	59	9	9	9	1	77	15	15	15	1	0	0	0	0	0	14	14	14	14	14	1
August 2044	24	6	6	6	1	59	10	10	10	1	0	0	0	0	0	11	11	11	11	11	1
August 2045	4	4	4	4	0	50	7	7	7	0	0	0	0	0	0	7	7	7	7	7	0
August 2046	3	3	3	3	0	5	4	4	4	0	0	0	0	0	0	5	5	5	5	5	0
August 2047	1	1	1	1	0	2	2	2	2	0	0	0	0	0	0	3	3	3	3	3	0
August 2048	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
August 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)	24.3	16.8	14.0	12.9	8.8	25.4	19.3	17.9	17.3	12.0	13.4	6.2	6.2	6.2	4.2	23.8	20.0	20.0	20.0	13.2	

**Security Group 8  
PSA Prepayment Assumption Rates**

Distribution Date	Classes AF and AS					Classes FP and SP					Classes PF and PS										
	0%	100%	200%	300%	400%	0%	100%	200%	300%	400%	0%	100%	200%	300%	400%						
Initial Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
August 2020	99	97	95	94	92	100	100	96	91	87	98	95	95	95	95	95	95	95	95	95	95
August 2021	97	92	86	81	77	100	100	85	70	56	96	87	87	87	87	87	87	87	87	87	87
August 2022	96	85	75	66	58	100	100	71	45	20	94	77	77	77	77	77	77	77	77	77	77
August 2023	94	78	65	53	43	100	100	60	26	0	91	67	67	67	67	67	67	67	67	67	65
August 2024	92	72	56	43	32	100	100	52	13	0	89	57	57	57	57	57	57	57	57	57	48
August 2025	91	66	48	34	24	100	100	46	5	0	86	49	49	49	49	49	49	49	49	49	36
August 2026	89	61	41	27	18	100	100	42	1	0	83	41	41	41	41	41	41	41	41	41	27
August 2027	87	55	35	22	13	100	100	40	0	0	80	33	33	33	33	33	33	33	33	33	20
August 2028	85	51	30	17	10	100	99	38	0	0	77	26	26	26	26	26	26	26	26	26	15
August 2029	83	46	26	14	7	100	96	36	0	0	74	21	21	21	21	21	21	21	21	21	11
August 2030	80	42	22	11	5	100	93	33	0	0	70	17	17	17	17	17	17	17	17	17	8
August 2031	78	38	19	9	4	100	88	30	0	0	66	13	13	13	13	13	13	13	13	13	6
August 2032	75	35	16	7	3	100	82	27	0	0	63	10	10	10	10	10	10	10	10	10	4
August 2033	72	31	13	5	2	100	77	24	0	0	58	8	8	8	8	8	8	8	8	8	3
August 2034	69	28	11	4	1	100	71	21	0	0	54	6	6	6	6	6	6	6	6	6	2
August 2035	66	25	9	3	1	100	65	18	0	0	49	5	5	5	5	5	5	5	5	5	2
August 2036	63	22	8	3	1	100	59	16	0	0	45	4	4	4	4	4	4	4	4	4	1
August 2037	60	20	7	2	1	100	53	13	0	0	39	3	3	3	3	3	3	3	3	3	1
August 2038	56	17	5	2	0	100	47	11	0	0	34	2	2	2	2	2	2	2	2	2	1
August 2039	52	15	4	1	0	100	42	10	0	0	28	2	2	2	2	2	2	2	2	2	0
August 2040	48	13	4	1	0	100	36	8	0	0	22	1	1	1	1	1	1	1	1	1	0
August 2041	44	11	3	1	0	100	31	6	0	0	16	1	1	1	1	1	1	1	1	1	0
August 2042	40	9	2	0	0	100	26	5	0	0	9	1	1	1	1	1	1	1	1	1	0
August 2043	35	8	2	0	0	100	22	4	0	0	2	1	1	1	1	1	1	1	1	1	0
August 2044	30	6	1	0	0	88	18	3	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2045	24	5	1	0	0	72	13	2	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2046	19	3	1	0	0	56	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2047	13	2	0	0	0	38	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0
August 2048	7	1	0	0	0	20	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August 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)	19.0	10.8	7.4	5.5	4.4	27.3	18.9	8.5	3.0	2.1	14.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	5.6	

## 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 2, 6 and 7 Securities that are backed by Underlying Certificates, 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 significantly 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 rates on such Classes are capped at the maximum rates 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 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 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 S to Prepayments  
Assumed Price 19.953142813%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>100%</u>	<u>200%</u>	<u>300%</u>	<u>400%</u>
1.0000% .....	19.0%	13.8%	8.4%	2.9%
2.1950% .....	12.2%	6.8%	1.3%	(4.4)%
4.1225% .....	0.5%	(5.1)%	(10.8)%	(16.8)%
6.0500% and above .....	**	**	**	**

**Sensitivity of Class SA to Prepayments  
Assumed Price 19.5%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>100%</u>	<u>200%</u>	<u>300%</u>	<u>400%</u>
1.0000% .....	19.6%	14.4%	9.0%	3.5%
2.1950% .....	12.7%	7.2%	1.7%	(4.0)%
4.1225% .....	0.8%	(4.8)%	(10.6)%	(16.5)%
6.0500% and above .....	**	**	**	**

**Sensitivity of Class SB to Prepayments  
Assumed Price 21.0%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>100%</u>	<u>200%</u>	<u>300%</u>	<u>400%</u>
1.0000% .....	17.6%	12.4%	7.1%	1.7%
2.1950% .....	11.1%	5.8%	0.3%	(5.3)%
4.1225% .....	0.0%	(5.6)%	(11.3)%	(17.2)%
6.0500% and above .....	**	**	**	**

**SECURITY GROUP 2**

**Sensitivity of Class AI to Prepayments  
Assumed Price 10.125%\***

<u>PSA Prepayment Assumption Rates</u>				
<u>300%</u>	<u>621%</u>	<u>769%</u>	<u>950%</u>	<u>1,300%</u>
28.6%	9.4%	0.0%	(12.0)%	(37.0)%

\* 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 16.0%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>300%</u>	<u>621%</u>	<u>950%</u>	<u>1,300%</u>
1.0000% .....	15.6%	(2.4)%	(22.1)%	(44.4)%
2.1950% .....	6.7%	(11.9)%	(32.5)%	(56.2)%
4.1225% .....	(7.8)%	(27.7)%	(50.3)%	(77.4)%
6.0500% and above .....	**	**	**	**

**Sensitivity of Class SD to Prepayments**  
**Assumed Price 13.25%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>300%</u>	<u>621%</u>	<u>950%</u>	<u>1,300%</u>
1.0000% .....	21.1%	0.6%	(22.7)%	(50.9)%
2.1950% .....	10.8%	(9.9)%	(33.7)%	(62.7)%
4.1225% .....	(5.8)%	(27.0)%	(51.8)%	(83.1)%
6.0500% and above .....	**	**	**	**

**Sensitivity of Class SE to Prepayments**  
**Assumed Price 16.0%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>300%</u>	<u>621%</u>	<u>950%</u>	<u>1,300%</u>
1.0000% .....	14.9%	(4.0)%	(25.0)%	(49.3)%
2.1950% .....	6.2%	(13.2)%	(35.0)%	(60.6)%
4.1225% .....	(8.1)%	(28.5)%	(52.0)%	(80.7)%
6.0500% and above .....	**	**	**	**

**Sensitivity of Class SG to Prepayments**  
**Assumed Price 14.67184375%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>300%</u>	<u>621%</u>	<u>950%</u>	<u>1,300%</u>
1.0000% .....	17.6%	(2.0)%	(24.0)%	(50.0)%
2.1950% .....	8.2%	(11.8)%	(34.4)%	(61.5)%
4.1225% .....	(7.1)%	(27.8)%	(51.9)%	(81.7)%
6.0500% 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 4

##### Sensitivity of Class GI to Prepayments Assumed Price 9.0%\*

PSA Prepayment Assumption Rates				
<u>150%</u>	<u>300%</u>	<u>450%</u>	<u>600%</u>	<u>855%</u>
37.8%	30.1%	22.3%	14.2%	0.0%

##### Sensitivity of Class MI to Prepayments Assumed Price 9.0%\*

PSA Prepayment Assumption Rates				
<u>150%</u>	<u>300%</u>	<u>450%</u>	<u>600%</u>	<u>889%</u>
38.1%	30.6%	23.1%	15.3%	0.0%

##### Sensitivity of Class NI to Prepayments Assumed Price 11.0%\*

PSA Prepayment Assumption Rates				
<u>150%</u>	<u>300%</u>	<u>450%</u>	<u>600%</u>	<u>694%</u>
28.7%	21.0%	13.2%	5.1%	0.0%

#### SECURITY GROUP 6

##### Sensitivity of Class HI to Prepayments Assumed Price 8.0%\*

PSA Prepayment Assumption Rates				
<u>250%</u>	<u>400%</u>	<u>500%</u>	<u>800%</u>	<u>1,236%</u>
32.0%	32.0%	32.0%	20.6%	0.0%

##### Sensitivity of Class IH to Prepayments Assumed Price 7.5%\*

PSA Prepayment Assumption Rates				
<u>250%</u>	<u>400%</u>	<u>500%</u>	<u>800%</u>	<u>1,328%</u>
36.0%	36.0%	36.0%	24.9%	0.0%

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



**SECURITY GROUP 7**

**Sensitivity of Class CS to Prepayments  
Assumed Price 21.625%\***

<b>LIBOR</b>	<b>PSA Prepayment Assumption Rates</b>			
	<b>125%</b>	<b>195%</b>	<b>230%</b>	<b>400%</b>
1.000% .....	12.0%	12.0%	12.0%	4.3%
2.182% .....	5.4%	5.4%	5.4%	(3.0)%
4.116% .....	(6.3)%	(6.3)%	(6.3)%	(15.7)%
6.050% and above .....	**	**	**	**

**Sensitivity of Class DI to Prepayments  
Assumed Price 52.0%\***

<b>PSA Prepayment Assumption Rates</b>				
<b>125%</b>	<b>195%</b>	<b>230%</b>	<b>400%</b>	<b>524%</b>
6.5%	6.5%	6.5%	3.5%	0.0%

**Sensitivity of Class EI to Prepayments  
Assumed Price 32.0%\***

<b>PSA Prepayment Assumption Rates</b>				
<b>125%</b>	<b>195%</b>	<b>230%</b>	<b>400%</b>	<b>501%</b>
12.2%	10.4%	9.5%	3.9%	0.0%

**Sensitivity of Class ID to Prepayments  
Assumed Price 52.0%\***

<b>PSA Prepayment Assumption Rates</b>				
<b>125%</b>	<b>195%</b>	<b>230%</b>	<b>400%</b>	<b>524%</b>
6.5%	6.5%	6.5%	3.5%	0.0%

**Sensitivity of Class IE to Prepayments  
Assumed Price 32.0%\***

<b>PSA Prepayment Assumption Rates</b>				
<b>125%</b>	<b>195%</b>	<b>230%</b>	<b>400%</b>	<b>501%</b>
12.2%	10.4%	9.5%	3.9%	0.0%

\* 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 8**

**Sensitivity of Class AS to Prepayments  
Assumed Price 8.134765625%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>100%</u>	<u>200%</u>	<u>300%</u>	<u>400%</u>
1.0000% .....	23.1%	18.0%	12.9%	7.6%
2.1950% .....	6.2%	0.8%	(4.8)%	(10.6)%
2.7725% .....	(2.9)%	(8.5)%	(14.3)%	(20.3)%
3.3500% and above .....	**	**	**	**

**Sensitivity of Class PS to Prepayments  
Assumed Price 9.71875%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>100%</u>	<u>200%</u>	<u>300%</u>	<u>400%</u>
1.0000% .....	11.9%	11.9%	11.9%	8.5%
2.1950% .....	(3.9)%	(3.9)%	(3.9)%	(8.7)%
2.7725% .....	(13.0)%	(13.0)%	(13.0)%	(18.6)%
3.3500% and above .....	**	**	**	**

**Sensitivity of Class SP to Prepayments  
Assumed Price 5.0%\***

<u>LIBOR</u>	<u>PSA Prepayment Assumption Rates</u>			
	<u>100%</u>	<u>200%</u>	<u>300%</u>	<u>400%</u>
1.0000% .....	51.0%	39.1%	19.8%	(0.9)%
2.1950% .....	23.5%	12.4%	(15.8)%	(42.3)%
2.7725% .....	9.5%	(0.1)%	(37.6)%	(69.1)%
3.3500% 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 Cadwalader, Wickersham & Taft 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 is 200% PSA in the case of the Group 1, 5 and 8 Securities, 621% PSA in the case of the Group 2 Securities, 300% PSA in the case of the Group 3 and 4 Securities, 400% PSA in the case of the Group 6 Securities and 195% PSA in the case of the Group 7 Securities (as described in “Yield, Maturity and Prepayment Considerations” in this Supplement). In the case of the Floating Rate and Inverse 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.

In the case of any Trust REMIC that is considered to be a “single-class REMIC” under temporary Treasury regulations, certain fees and expenses of the single-class REMIC would be allocated proportionately among the Regular Securities and Residual Securities of such Trust REMIC. An individual, trust or estate that holds Regular Securities in a single-class REMIC (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 fees or expenses of a single-class REMIC under Section 212 of the Code for any taxable year beginning before January 1, 2026. For a discussion of single-class REMICs, see “Certain United States Federal Income Tax Consequences — Tax

Treatment of Regular Securities — Single Class REMICs” in the Base Offering Circular, as modified by the previous sentence. Prospective investors in the Regular Securities are urged to consult with their tax advisors regarding the potential applicability of these rules 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) August 1, 2019 on the Fixed Rate Classes and (2) August 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 Scheduled Principal Balances or 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 Cadwalader, Wickersham & Taft LLP and Marcell Solomon & Associates PC, Bowie, Maryland, and for the Trustee by Aini & Associates PLLC.

Schedule I

Available Combinations(1)

Class	REMIC Securities		MX Securities					
	Original Class Principal Balance or Class Notional Balance	Related MX Class	Maximum Original Class Principal Balance or Class Notional Balance(2)	Principal Type(3)	Interest Rate	Interest Type(3)	CUSIP Number	Final Distribution Date(4)
<b>Security Group 1</b>								
Combination 1								
AB	\$ 83,083,896	A	\$ 119,047,620	PT	2.30%	FIX	38381X3F1	August 2049
AC	35,963,724							
Combination 2								
SA	\$ 56,497,048	S	\$ 80,952,380	NTL(PT)	(5)	INV/IO	38381X3G9	August 2049
SB	24,455,332							
Combination 3								
FA	\$ 56,497,048	F	\$ 80,952,380	PT	(5)	FLT	38381X3H7	August 2049
FB	24,455,332							
<b>Security Group 2</b>								
Combination 4								
BA	\$ 56,863,477	B	\$ 215,129,216	SC/PT	2.30%	FIX	38381X3J3	August 2049
BC	97,313,358							
BD	60,952,381							
Combination 5								
FD	\$ 22,745,390	FG	\$ 47,095,226	SC/PT	(5)	FLT	38381X3K0	April 2049
FE	24,349,836							
Combination 6								
SD	\$ 22,745,390	SG	\$ 47,095,226	NTL(SC/PT)	(5)	INV/IO	38381X3L8	April 2049
SE	24,349,836							
<b>Security Group 3</b>								
Combination 7								
JV	\$ 10,644,000	JD	\$ 29,184,337	SEQ	3.50%	FIX	38381X3M6	August 2049
JZ	18,540,337							

REMIC Securities			MX Securities					
Class	Original Class Principal Balance or Class Notional Balance	Related MX Class	Maximum Original Class Principal Balance or Class Notional Balance(2)	Principal Type(3)	Interest Rate	Interest Type(3)	CUSIP Number	Final Distribution Date(4)
Combination 8								
JC	\$ 52,930,000	JB	\$ 82,114,337	SEQ	3.50%	FIX	38381X3N4	August 2049
JV	10,644,000							
JZ	18,540,337							
<b>Security Group 4</b>								
Combination 9								
GV	\$ 5,292,000	KV	\$ 10,668,000	SEQ/AD	3.50%	FIX	38381X3P9	November 2030
MV	2,455,000							
NV	2,921,000							
Combination 10								
VG	\$ 6,050,000	VK	\$ 12,196,000	SEQ/AD	3.50%	FIX	38381X3Q7	December 2039
VM	2,806,000							
VN	3,340,000							
Combination 11								
GZ	\$ 11,015,357	KZ	\$ 22,206,826	SEQ	3.50%	FIX/Z	38381X3R5	August 2049
MZ	5,110,113							
NZ	6,081,356							
Combination 12								
GV	\$ 5,292,000	KD	\$ 45,070,826	SEQ	3.50%	FIX	38381X3S3	August 2049
GZ	11,015,357							
MV	2,455,000							
MZ	5,110,113							
NV	2,921,000							
NZ	6,081,356							
VG	6,050,000							
VM	2,806,000							
VN	3,340,000							
Combination 13								
GV	\$ 5,292,000	GD	\$ 22,357,357	SEQ	3.50%	FIX	38381X3T1	August 2049
GZ	11,015,357							
VG	6,050,000							



REMIC Securities

MX Securities

Class	REMIC Securities		MX Securities					
	Original Class Principal Balance or Class Notional Balance	Related MX Class	Maximum Original Class Principal Balance or Class Notional Balance(2)	Principal Type(3)	Interest Rate	Interest Type(3)	CUSIP Number	Final Distribution Date(4)
Combination 14								
MV	\$ 2,455,000	MD	\$ 10,371,113	SEQ	3.50%	FIX	38381X3U8	August 2049
MZ	5,110,113							
VM	2,806,000							
Combination 15								
NV	\$ 2,921,000	ND	\$ 12,342,356	SEQ	3.50%	FIX	38381X3V6	August 2049
NZ	6,081,356							
VN	3,340,000							
Combination 16								
GC	\$ 20,537,000	KC	\$ 40,361,000	SEQ	3.50%	FIX	38381X3W4	May 2046
MC	9,004,000							
NC	10,820,000							
Combination 17								
GC	\$ 20,537,000	KB	\$ 85,431,826	SEQ	3.50%	FIX	38381X3X2	August 2049
GV	5,292,000							
GZ	11,015,357							
MC	9,004,000							
MV	2,455,000							
MZ	5,110,113							
NC	10,820,000							
NV	2,921,000							
NZ	6,081,356							
VG	6,050,000							
VM	2,806,000							
VN	3,340,000							
Combination 18								
GC	\$ 20,537,000	GB	\$ 42,894,357	SEQ	3.50%	FIX	38381X3Y0	August 2049
GV	5,292,000							
GZ	11,015,357							
VG	6,050,000							

REMIC Securities		MX Securities						
Class	Original Class Principal Balance or Class Notional Balance	Related MX Class	Maximum Original Class Principal Balance or Class Notional Balance(2)	Principal Type(3)	Interest Rate	Interest Type(3)	CUSIP Number	Final Distribution Date(4)
Combination 19								
MC	\$ 9,004,000	MB	\$ 19,375,113	SEQ	3.50%	FIX	38381X3Z7	August 2049
MV	2,455,000							
MZ	5,110,113							
VM	2,806,000							
Combination 20								
NC	\$ 10,820,000	NB	\$ 23,162,356	SEQ	3.50%	FIX	38381X4A1	August 2049
NV	2,921,000							
NZ	6,081,356							
VN	3,340,000							
Combination 21								
GA	\$ 67,149,000	G	\$ 133,738,000	SEQ	3.50%	FIX	38381X4B9	October 2042
MA	30,330,000							
NA	36,259,000							
<b>Security Group 5</b>								
Combination 22								
LA	\$ 21,048,000	LB	\$ 23,045,000	PAC/AD	3.50%	FIX	38381X4C7	August 2049
LY	1,997,000							
<b>Security Group 6</b>								
Combination 23(6)								
HE	\$ 30,000,000	HA	\$ 30,000,000	PAC/AD	2.00%	FIX	38381X4D5	August 2049
		HB	30,000,000	PAC/AD	2.25	FIX	38381X4E3	August 2049
		HC	30,000,000	PAC/AD	2.50	FIX	38381X4F0	August 2049
		HD	30,000,000	PAC/AD	2.75	FIX	38381X4G8	August 2049
		HG	24,000,000	PAC/AD	3.25	FIX	38381X4H6	August 2049
		HP	20,000,000	PAC/AD	3.50	FIX	38381X4J2	August 2049
		IH	7,500,000	NTL(PAC/AD)	4.00	FIX/IO	38381X4K9	August 2049
Combination 24								
HM	\$ 1,341,000	HK	\$ 10,000,000	SC/PAC/SEQ/AD	3.00%	FIX	38381X4L7	August 2049
HN	8,659,000							

REMIC Securities

MX Securities

Class	REMIC Securities		MX Securities					
	Original Class Principal Balance or Class Notional Balance	Related MX Class	Maximum Original Class Principal Balance or Class Notional Balance(2)	Principal Type(3)	Interest Rate	Interest Type(3)	CUSIP Number	Final Distribution Date(4)
<b>Security Group 7</b>								
Combination 25(6)								
DL	\$ 11,744,210	DA	\$ 11,744,210	SC/PT	2.00%	FIX	38381X4M5	June 2049
ID	2,609,824	DB	11,744,210	SC/PT	2.25	FIX	38381X4N3	June 2049
		DC	11,744,210	SC/PT	2.75	FIX	38381X4P8	June 2049
		DE	11,744,210	SC/PT	3.00	FIX	38381X4Q6	June 2049
		DG	11,744,210	SC/PT	3.25	FIX	38381X4R4	June 2049
		DH	11,744,210	SC/PT	3.50	FIX	38381X5J1	June 2049
		DI	3,914,736	NTL(SC/PT)	4.50	FIX/IO	38381X4S2	June 2049
		DJ	10,066,465	SC/PT	3.75	FIX	38381X4T0	June 2049
		DK	8,808,157	SC/PT	4.00	FIX	38381X4U7	June 2049
Combination 26(6)								
EL	\$ 11,221,162	EA	\$ 11,221,162	SC/PT	2.00%	FIX	38381X4V5	April 2049
IE	3,740,387	EB	11,221,162	SC/PT	2.25	FIX	38381X4W3	April 2049
		EC	11,221,162	SC/PT	2.75	FIX	38381X4X1	April 2049
		ED	11,221,162	SC/PT	3.00	FIX	38381X4Y9	April 2049
		EG	11,221,162	SC/PT	3.25	FIX	38381X4Z6	April 2049
		EH	11,221,162	SC/PT	3.50	FIX	38381X5A0	April 2049
		EI	4,987,183	NTL(SC/PT)	4.50	FIX/IO	38381X5B8	April 2049
		EJ	11,221,162	SC/PT	3.75	FIX	38381X5C6	April 2049
		EK	11,221,162	SC/PT	4.00	FIX	38381X5D4	April 2049
Combination 27								
DL	\$ 11,744,210	CL	\$ 28,236,610	SC/PT/PAC/AD	2.50%	FIX	38381X5E2	August 2049
EL	11,221,162							
PB	5,271,238							
Combination 28								
DL	\$ 11,744,210	GL	\$ 22,965,372	SC/PT	3.50%	FIX	38381X5F9	June 2049
EL	11,221,162							
ID	2,609,824							
IE	2,493,592							

REMIC Securities

MX Securities

Class	REMIC Securities		MX Securities					
	Original Class Principal Balance or Class Notional Balance	Related MX Class	Maximum Original Class Principal Balance or Class Notional Balance(2)	Principal Type(3)	Interest Rate	Interest Type(3)	CUSIP Number	Final Distribution Date(4)
<b>Security Group 8</b>								
Combination 29								
FP	\$ 33,587,987	AF	\$100,000,000	PT	(5)	FLT	38381X5G7	August 2049
PF	66,412,013							
Combination 30								
PS	\$ 66,412,013	AS	\$100,000,000	NTL(PT)	(5)	INV/IO	38381X5H5	August 2049
SP	33,587,987							

(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) In the case of Combinations 23, 25 and 26, various subcombinations are permitted. See “Description of the Securities — Modification and Exchange” in the Base Offering Circular for a discussion of subcombinations.

## SCHEDULED PRINCIPAL BALANCES

<u>Distribution Date</u>	<u>Classes IA and LY (in the aggregate)</u>	<u>Classes HE, HN, HY and ZJ (in the aggregate)</u>	<u>Classes CF, PA and PB (in the aggregate)</u>	<u>Class PF</u>
Initial Balance . . . . .	\$23,045,000.00	\$38,764,493.00	\$84,093,650.00	\$66,412,013.00
September 2019 . . . . .	22,975,364.01	38,602,846.21	83,891,632.58	66,246,309.18
October 2019 . . . . .	22,898,562.51	38,420,359.88	83,668,628.04	66,063,515.43
November 2019 . . . . .	22,814,620.84	38,217,115.60	83,424,697.67	65,863,688.84
December 2019 . . . . .	22,723,569.84	37,993,221.39	83,159,916.21	65,646,895.32
January 2020 . . . . .	22,625,445.83	37,748,811.72	82,874,371.78	65,413,209.62
February 2020 . . . . .	22,520,290.55	37,484,047.46	82,568,165.86	65,162,715.27
March 2020 . . . . .	22,408,151.21	37,199,115.73	82,241,413.23	64,895,504.58
April 2020 . . . . .	22,289,080.37	36,894,229.75	81,894,241.93	64,611,678.54
May 2020 . . . . .	22,163,135.98	36,569,628.62	81,526,793.17	64,311,346.80
June 2020 . . . . .	22,030,381.28	36,225,576.99	81,139,221.21	63,994,627.59
July 2020 . . . . .	21,890,884.78	35,862,364.77	80,731,693.29	63,661,647.68
August 2020 . . . . .	21,744,720.16	35,480,306.72	80,304,389.48	63,312,542.25
September 2020 . . . . .	21,591,966.27	35,079,741.96	79,857,502.58	62,947,454.85
October 2020 . . . . .	21,432,706.96	34,661,033.50	79,391,237.93	62,566,537.29
November 2020 . . . . .	21,267,031.11	34,224,567.69	78,905,813.26	62,169,949.55
December 2020 . . . . .	21,095,032.46	33,770,753.54	78,401,458.52	61,757,859.64
January 2021 . . . . .	20,916,809.54	33,300,022.13	77,878,415.71	61,330,443.54
February 2021 . . . . .	20,732,465.57	32,812,825.85	77,336,938.61	60,887,885.03
March 2021 . . . . .	20,542,108.38	32,309,637.63	76,777,292.64	60,430,375.58
April 2021 . . . . .	20,345,850.27	31,790,950.18	76,199,754.56	59,958,114.24
May 2021 . . . . .	20,143,807.86	31,257,275.05	75,604,612.29	59,471,307.44
June 2021 . . . . .	19,936,102.05	30,709,141.81	74,992,164.62	58,970,168.90
July 2021 . . . . .	19,722,857.82	30,147,097.04	74,362,720.93	58,454,919.43
August 2021 . . . . .	19,504,204.12	29,571,703.40	73,716,600.95	57,925,786.83
September 2021 . . . . .	19,280,273.72	28,983,538.60	73,054,134.45	57,383,005.64
October 2021 . . . . .	19,051,203.08	28,383,194.32	72,375,660.93	56,826,817.04
November 2021 . . . . .	18,817,132.19	27,771,275.16	71,681,529.32	56,257,468.62
December 2021 . . . . .	18,578,204.41	27,148,397.52	70,972,097.67	55,675,214.24
January 2022 . . . . .	18,334,566.33	26,533,839.97	70,247,732.77	55,080,313.80
February 2022 . . . . .	18,092,846.98	25,927,482.84	69,508,809.89	54,488,664.77
March 2022 . . . . .	17,853,030.01	25,329,208.16	68,774,690.28	53,900,250.13
April 2022 . . . . .	17,615,099.22	24,738,899.56	68,045,340.26	53,315,053.00
May 2022 . . . . .	17,379,038.52	24,156,442.31	67,320,726.36	52,733,056.55
June 2022 . . . . .	17,144,831.97	23,581,723.24	66,600,815.32	52,154,244.05
July 2022 . . . . .	16,912,463.72	23,014,630.76	65,885,574.12	51,578,598.85
August 2022 . . . . .	16,681,918.09	22,455,054.85	65,174,969.93	51,006,104.40
September 2022 . . . . .	16,453,179.50	21,902,886.98	64,468,970.14	50,436,744.23
October 2022 . . . . .	16,226,232.49	21,358,020.13	63,767,542.35	49,870,501.94
November 2022 . . . . .	16,001,061.75	20,820,348.79	63,070,654.38	49,307,361.24
December 2022 . . . . .	15,777,652.05	20,289,768.87	62,378,274.25	48,747,305.90
January 2023 . . . . .	15,555,988.32	19,766,177.76	61,690,370.20	48,190,319.79
February 2023 . . . . .	15,336,055.60	19,249,474.25	61,006,910.65	47,636,386.86
March 2023 . . . . .	15,117,839.03	18,739,558.54	60,327,864.25	47,085,491.14
April 2023 . . . . .	14,901,323.90	18,236,332.21	59,653,199.85	46,537,616.73

<u>Distribution Date</u>	<u>Classes IA and LY (in the aggregate)</u>	<u>Classes HE, HN, HY and ZJ (in the aggregate)</u>	<u>Classes CF, PA and PB (in the aggregate)</u>	<u>Class PF</u>
May 2023	\$14,686,495.58	\$17,739,698.22	\$58,982,886.49	\$45,992,747.85
June 2023	14,473,339.59	17,249,560.85	58,316,893.41	45,450,868.76
July 2023	14,261,841.55	16,765,825.73	57,655,190.07	44,911,963.83
August 2023	14,051,987.20	16,288,399.77	56,997,746.11	44,376,017.49
September 2023	13,843,762.38	15,817,191.21	56,344,531.37	43,843,014.26
October 2023	13,637,153.06	15,352,109.52	55,695,515.90	43,312,938.75
November 2023	13,432,145.32	14,893,065.47	55,050,669.92	42,785,775.63
December 2023	13,228,725.33	14,439,971.02	54,409,963.85	42,261,509.66
January 2024	13,026,879.40	13,992,739.39	53,773,368.32	41,740,125.68
February 2024	12,826,593.93	13,559,061.22	53,140,854.13	41,221,608.60
March 2024	12,627,855.42	13,138,696.30	52,512,392.29	40,705,943.42
April 2024	12,430,650.52	12,731,239.03	51,887,953.96	40,193,115.20
May 2024	12,234,965.93	12,336,296.09	51,267,510.53	39,683,109.11
June 2024	12,040,788.49	11,953,486.07	50,651,033.55	39,175,910.36
July 2024	11,848,105.14	11,582,439.12	50,038,494.76	38,671,504.25
August 2024	11,656,902.93	11,222,796.59	49,429,866.08	38,169,876.16
September 2024	11,467,168.98	10,874,210.69	48,825,119.63	37,671,011.54
October 2024	11,278,890.57	10,536,344.17	48,224,227.68	37,174,895.93
November 2024	11,092,055.02	10,208,870.02	47,627,162.71	36,681,514.92
December 2024	10,906,649.79	9,891,471.12	47,033,897.35	36,190,854.19
January 2025	10,722,662.43	9,583,839.98	46,444,404.43	35,702,899.50
February 2025	10,540,080.58	9,285,678.42	45,858,656.95	35,217,636.67
March 2025	10,358,892.00	8,996,697.31	45,276,628.08	34,735,051.59
April 2025	10,179,084.53	8,716,616.29	44,698,291.16	34,255,130.24
May 2025	10,000,646.10	8,445,163.51	44,123,619.71	33,777,858.66
June 2025	9,823,564.76	8,182,075.36	43,552,587.42	33,303,222.97
July 2025	9,647,828.63	7,927,096.24	42,985,168.14	32,831,209.36
August 2025	9,473,425.95	7,679,978.30	42,421,335.92	32,361,804.08
September 2025	9,300,345.02	7,440,481.21	41,861,064.94	31,894,993.46
October 2025	9,128,574.27	7,208,371.96	41,304,329.56	31,430,763.91
November 2025	8,959,743.55	6,983,424.60	40,751,104.32	30,969,101.89
December 2025	8,793,933.10	6,765,420.03	40,201,363.91	30,509,993.95
January 2026	8,631,090.08	6,554,145.83	39,655,083.18	30,053,426.70
February 2026	8,471,162.56	6,349,396.02	39,112,237.16	29,599,386.81
March 2026	8,314,099.50	6,150,970.88	38,572,801.03	29,147,861.04
April 2026	8,159,850.75	5,958,676.78	38,036,750.12	28,698,836.20
May 2026	8,008,367.01	5,772,325.95	37,504,059.93	28,252,299.18
June 2026	7,859,599.85	5,591,736.35	36,974,706.14	27,808,236.93
July 2026	7,713,501.66	5,416,731.45	36,448,664.54	27,366,636.48
August 2026	7,570,025.65	5,247,140.13	35,925,911.12	26,927,484.90
September 2026	7,429,125.84	5,082,796.43	35,406,421.99	26,490,769.35
October 2026	7,290,757.06	4,923,539.48	34,893,282.24	26,056,477.06
November 2026	7,154,874.89	4,769,213.28	34,387,149.30	25,624,595.31
December 2026	7,021,435.69	4,619,666.60	33,887,930.75	25,195,111.45
January 2027	6,890,396.58	4,474,752.78	33,395,535.38	24,768,012.91
February 2027	6,761,715.42	4,334,329.66	32,909,873.16	24,343,287.16
March 2027	6,635,350.78	4,198,259.40	32,430,855.20	23,920,921.75

<u>Distribution Date</u>	<u>Classes IA and LY (in the aggregate)</u>	<u>Classes HE, HN, HY and ZJ (in the aggregate)</u>	<u>Classes CF, PA and PB (in the aggregate)</u>	<u>Class PF</u>
April 2027	\$ 6,511,261.96	\$ 4,066,408.36	\$31,958,393.77	\$23,500,904.30
May 2027	6,389,408.96	3,938,646.95	31,492,402.30	23,083,222.47
June 2027	6,269,752.49	3,814,849.57	31,032,795.28	22,667,864.02
July 2027	6,152,253.89	3,694,894.41	30,579,488.36	22,254,816.75
August 2027	6,036,875.23	3,578,663.40	30,132,398.25	21,844,068.51
September 2027	5,923,579.18	3,466,042.06	29,691,442.74	21,437,723.69
October 2027	5,812,329.10	3,356,919.39	29,256,540.69	21,038,654.65
November 2027	5,703,088.95	3,251,187.80	28,827,612.01	20,646,734.29
December 2027	5,595,823.34	3,148,742.97	28,404,577.63	20,261,837.69
January 2028	5,490,497.47	3,049,483.76	27,987,359.51	19,883,842.09
February 2028	5,387,077.16	2,953,312.11	27,575,880.64	19,512,626.81
March 2028	5,285,528.82	2,860,132.99	27,170,064.97	19,148,073.26
April 2028	5,185,819.42	2,769,854.22	26,769,837.46	18,790,064.90
May 2028	5,087,916.54	2,682,386.48	26,375,124.04	18,438,487.18
June 2028	4,991,788.28	2,597,643.15	25,985,851.58	18,093,227.52
July 2028	4,897,403.33	2,515,540.28	25,601,947.93	17,754,175.29
August 2028	4,804,730.90	2,435,996.46	25,223,341.83	17,421,221.75
September 2028	4,713,740.73	2,358,932.79	24,849,962.99	17,094,260.03
October 2028	4,624,403.11	2,284,272.76	24,481,741.99	16,773,185.11
November 2028	4,536,688.82	2,211,942.23	24,118,610.33	16,457,893.78
December 2028	4,450,569.16	2,141,869.31	23,760,500.41	16,148,284.59
January 2029	4,366,015.93	2,073,984.30	23,407,345.48	15,844,257.86
February 2029	4,283,001.40	2,008,219.64	23,059,079.66	15,545,715.61
March 2029	4,201,498.35	1,944,509.86	22,715,637.95	15,252,561.56
April 2029	4,121,480.01	1,882,791.46	22,376,956.16	14,964,701.08
May 2029	4,042,920.09	1,823,002.91	22,042,970.96	14,682,041.18
June 2029	3,965,792.74	1,765,084.55	21,713,619.82	14,404,490.47
July 2029	3,890,072.59	1,708,978.55	21,388,841.04	14,131,959.14
August 2029	3,815,734.66	1,654,628.86	21,068,573.70	13,864,358.91
September 2029	3,742,754.46	1,601,981.14	20,752,757.69	13,601,603.06
October 2029	3,671,107.89	1,550,982.71	20,441,333.68	13,343,606.33
November 2029	3,600,771.29	1,501,582.52	20,134,243.10	13,090,284.96
December 2029	3,531,721.38	1,453,731.08	19,831,428.14	12,841,556.61
January 2030	3,463,935.33	1,407,380.42	19,532,831.76	12,597,340.39
February 2030	3,397,390.67	1,362,484.04	19,238,397.63	12,357,556.80
March 2030	3,332,065.34	1,318,996.85	18,948,070.20	12,122,127.69
April 2030	3,267,937.66	1,276,875.18	18,661,794.59	11,890,976.29
May 2030	3,204,986.32	1,236,076.67	18,379,516.67	11,664,027.14
June 2030	3,143,190.40	1,196,560.28	18,101,182.99	11,441,206.10
July 2030	3,082,529.33	1,158,286.22	17,826,740.82	11,222,440.30
August 2030	3,022,982.90	1,121,215.92	17,556,138.10	11,007,658.13
September 2030	2,964,531.25	1,085,312.01	17,289,323.45	10,796,789.23
October 2030	2,907,154.88	1,050,538.26	17,026,246.17	10,589,764.45
November 2030	2,850,834.62	1,016,859.55	16,766,856.20	10,386,515.84
December 2030	2,795,551.62	984,241.84	16,511,104.15	10,186,976.62
January 2031	2,741,287.40	952,652.16	16,258,941.27	9,991,081.18
February 2031	2,688,023.76	922,058.52	16,010,319.44	9,798,765.03

<u>Distribution Date</u>	<u>Classes IA and LY (in the aggregate)</u>	<u>Classes HE, HN, HY and ZJ (in the aggregate)</u>	<u>Classes CF, PA and PB (in the aggregate)</u>	<u>Class PF</u>
March 2031	\$ 2,635,742.83	\$ 892,429.94	\$15,765,191.17	\$ 9,609,964.82
April 2031	2,584,427.08	863,736.38	15,523,509.59	9,424,618.28
May 2031	2,534,059.24	835,948.74	15,285,228.44	9,242,664.22
June 2031	2,484,622.38	809,038.80	15,050,302.07	9,064,042.52
July 2031	2,436,099.85	782,979.21	14,818,685.41	8,888,694.10
August 2031	2,388,475.29	757,743.48	14,590,334.01	8,716,560.90
September 2031	2,341,732.63	733,305.93	14,365,203.95	8,547,585.89
October 2031	2,295,856.08	709,641.66	14,143,251.94	8,381,712.99
November 2031	2,250,830.13	686,726.54	13,924,435.21	8,218,887.13
December 2031	2,206,639.54	664,537.21	13,708,711.58	8,059,054.18
January 2032	2,163,269.32	643,050.99	13,496,039.41	7,902,160.95
February 2032	2,120,704.77	622,245.94	13,286,377.59	7,748,155.19
March 2032	2,078,931.44	602,100.78	13,079,685.56	7,596,985.54
April 2032	2,037,935.13	582,594.87	12,875,923.31	7,448,601.53
May 2032	1,997,701.87	563,708.25	12,675,051.32	7,302,953.60
June 2032	1,958,217.97	545,421.52	12,477,030.60	7,159,993.01
July 2032	1,919,469.95	527,715.94	12,281,822.68	7,019,671.90
August 2032	1,881,444.59	510,573.31	12,089,389.59	6,881,943.23
September 2032	1,844,128.89	493,976.01	11,899,693.84	6,746,760.77
October 2032	1,807,510.08	477,906.95	11,712,698.45	6,614,079.13
November 2032	1,771,575.61	462,349.58	11,528,366.91	6,483,853.66
December 2032	1,736,313.16	447,287.86	11,346,663.22	6,356,040.54
January 2033	1,701,710.62	432,706.26	11,167,551.81	6,230,596.67
February 2033	1,667,756.09	418,589.70	10,990,997.59	6,107,479.73
March 2033	1,634,437.89	404,923.61	10,816,965.96	5,986,648.13
April 2033	1,601,744.53	391,693.82	10,645,422.73	5,868,061.00
May 2033	1,569,664.75	378,886.65	10,476,334.19	5,751,678.19
June 2033	1,538,187.44	366,488.80	10,309,667.05	5,637,460.25
July 2033	1,507,301.74	354,487.43	10,145,388.48	5,525,368.42
August 2033	1,476,996.95	342,870.05	9,983,466.05	5,415,364.61
September 2033	1,447,262.56	331,624.59	9,823,867.80	5,307,411.41
October 2033	1,418,088.25	320,739.35	9,666,562.15	5,201,472.04
November 2033	1,389,463.89	310,202.98	9,511,517.95	5,097,510.39
December 2033	1,361,379.51	300,004.49	9,358,704.47	4,995,490.97
January 2034	1,333,825.34	290,133.24	9,208,091.36	4,895,378.90
February 2034	1,306,791.76	280,578.91	9,059,648.70	4,797,139.92
March 2034	1,280,269.32	271,331.51	8,913,346.93	4,700,740.39
April 2034	1,254,248.76	262,381.35	8,769,156.91	4,606,147.22
May 2034	1,228,720.97	253,719.05	8,627,049.86	4,513,327.92
June 2034	1,203,676.99	245,335.52	8,486,997.40	4,422,250.58
July 2034	1,179,108.04	237,221.95	8,348,971.50	4,332,883.83
August 2034	1,155,005.47	229,369.81	8,212,944.52	4,245,196.86
September 2034	1,131,360.81	221,770.84	8,078,889.17	4,159,159.39
October 2034	1,108,165.72	214,417.01	7,946,778.53	4,074,741.69
November 2034	1,085,412.01	207,300.58	7,816,586.03	3,991,914.54
December 2034	1,063,091.65	200,414.02	7,688,285.46	3,910,649.23
January 2035	1,041,196.73	193,750.06	7,561,850.94	3,830,917.56



<u>Distribution Date</u>	<u>Classes IA and LY (in the aggregate)</u>	<u>Classes HE, HN, HY and ZJ (in the aggregate)</u>	<u>Classes CF, PA and PB (in the aggregate)</u>	<u>Class PF</u>
February 2035	\$ 1,019,719.51	\$ 187,301.64	\$ 7,437,256.94	\$ 3,752,691.82
March 2035	998,652.35	181,061.92	7,314,478.26	3,675,944.80
April 2035	977,987.77	175,024.28	7,193,490.05	3,600,649.75
May 2035	957,718.42	169,182.31	7,074,267.78	3,526,780.40
June 2035	937,837.07	163,529.80	6,956,787.22	3,454,310.94
July 2035	918,336.64	158,060.72	6,841,024.51	3,383,216.03
August 2035	899,210.15	152,769.24	6,726,956.06	3,313,470.74
September 2035	880,450.76	147,649.72	6,614,558.62	3,245,050.61
October 2035	862,051.74	142,696.68	6,503,809.22	3,177,931.60
November 2035	844,006.50	137,904.83	6,394,685.23	3,112,090.11
December 2035	826,308.54	133,269.03	6,287,164.29	3,047,502.91
January 2036	808,951.49	128,784.30	6,181,224.36	2,984,147.24
February 2036	791,929.11	124,445.84	6,076,843.66	2,922,000.70
March 2036	775,235.24	120,248.96	5,974,000.73	2,861,041.29
April 2036	758,863.84	116,189.16	5,872,674.38	2,801,247.42
May 2036	742,808.99	112,262.06	5,772,843.70	2,742,597.86
June 2036	727,064.86	108,463.41	5,674,488.07	2,685,071.75
July 2036	711,625.73	104,789.12	5,577,587.12	2,628,648.63
August 2036	696,485.99	101,235.19	5,482,120.78	2,573,308.37
September 2036	681,640.12	97,797.79	5,388,069.21	2,519,031.22
October 2036	667,082.70	94,473.17	5,295,412.88	2,465,797.75
November 2036	652,808.41	91,257.73	5,204,132.47	2,413,588.90
December 2036	638,812.02	88,147.96	5,114,208.96	2,362,385.94
January 2037	625,088.40	85,140.47	5,025,623.55	2,312,170.47
February 2037	611,632.50	82,231.98	4,938,357.71	2,262,924.41
March 2037	598,439.37	79,419.32	4,852,393.15	2,214,630.01
April 2037	585,504.16	76,699.40	4,767,711.82	2,167,269.84
May 2037	572,822.08	74,069.24	4,684,295.92	2,120,826.76
June 2037	560,388.44	71,525.95	4,602,127.88	2,075,283.94
July 2037	548,198.64	69,066.74	4,521,190.36	2,030,624.87
August 2037	536,248.16	66,688.90	4,441,466.25	1,986,833.30
September 2037	524,532.54	64,389.80	4,362,938.69	1,943,893.29
October 2037	513,047.43	62,166.90	4,285,591.02	1,901,789.19
November 2037	501,788.55	60,017.75	4,209,406.81	1,860,505.60
December 2037	490,751.68	57,939.97	4,134,369.86	1,820,027.42
January 2038	479,932.69	55,931.25	4,060,464.16	1,780,339.80
February 2038	469,327.53	53,989.35	3,987,673.94	1,741,428.17
March 2038	458,932.20	52,112.11	3,915,983.64	1,703,278.22
April 2038	448,742.80	50,297.44	3,845,377.88	1,665,875.87
May 2038	438,755.48	48,543.32	3,775,841.52	1,629,207.32
June 2038	428,966.47	46,847.78	3,707,359.60	1,593,259.01
July 2038	419,372.06	45,208.91	3,639,917.36	1,558,017.60
August 2038	409,968.61	43,624.89	3,573,500.26	1,523,470.02
September 2038	400,752.55	42,093.92	3,508,093.94	1,489,603.41
October 2038	391,720.36	40,614.29	3,443,684.21	1,456,405.15
November 2038	382,868.61	39,184.32	3,380,257.12	1,423,862.84
December 2038	374,193.91	37,802.39	3,317,798.86	1,391,964.31

<u>Distribution Date</u>	<u>Classes IA and LY (in the aggregate)</u>	<u>Classes HE, HN, HY and ZJ (in the aggregate)</u>	<u>Classes CF, PA and PB (in the aggregate)</u>	<u>Class PF</u>
January 2039	\$ 365,692.94	\$ 36,466.95	\$ 3,256,295.82	\$ 1,360,697.60
February 2039	357,362.43	35,176.47	3,195,734.59	1,330,050.96
March 2039	349,199.17	33,929.49	3,136,101.93	1,300,012.86
April 2039	341,200.03	32,724.59	3,077,384.76	1,270,571.98
May 2039	333,361.92	31,560.40	3,019,570.19	1,241,717.18
June 2039	325,681.79	30,435.57	2,962,645.51	1,213,437.55
July 2039	318,156.68	29,348.83	2,906,598.18	1,185,722.36
August 2039	310,783.66	28,298.93	2,851,415.80	1,158,561.06
September 2039	303,559.85	27,284.66	2,797,086.18	1,131,943.32
October 2039	296,482.44	26,304.84	2,743,597.27	1,105,858.97
November 2039	289,548.67	25,358.36	2,690,937.17	1,080,298.02
December 2039	282,755.80	24,444.11	2,639,094.17	1,055,250.69
January 2040	276,101.17	23,561.04	2,588,056.70	1,030,707.34
February 2040	269,582.17	22,708.12	2,537,813.35	1,006,658.53
March 2040	263,196.22	21,884.35	2,488,352.86	983,094.98
April 2040	256,940.79	21,088.78	2,439,664.12	960,007.56
May 2040	250,813.41	20,320.47	2,391,736.18	937,387.34
June 2040	244,811.64	19,578.53	2,344,558.23	915,225.53
July 2040	238,933.09	18,862.08	2,298,119.62	893,513.49
August 2040	233,175.41	18,170.28	2,252,409.81	872,242.75
September 2040	227,536.29	17,502.32	2,207,418.44	851,404.98
October 2040	222,013.49	16,857.40	2,163,135.27	830,992.03
November 2040	216,604.77	16,234.76	2,119,550.20	810,995.87
December 2040	211,307.96	15,633.66	2,076,653.28	791,408.61
January 2041	206,120.91	15,053.39	2,034,434.67	772,222.52
February 2041	201,041.53	14,493.26	1,992,884.69	753,430.01
March 2041	196,067.75	13,952.58	1,951,993.77	735,023.62
April 2041	191,197.54	13,430.72	1,911,752.48	716,996.02
May 2041	186,428.93	12,927.05	1,872,151.52	699,340.02
June 2041	181,759.95	12,440.95	1,833,181.71	682,048.57
July 2041	177,188.69	11,971.85	1,794,834.00	665,114.73
August 2041	172,713.27	11,519.17	1,757,099.45	648,531.70
September 2041	168,331.84	11,082.37	1,719,969.26	632,292.79
October 2041	164,042.60	10,660.91	1,683,434.74	616,391.45
November 2041	159,843.76	10,254.28	1,647,487.32	600,821.22
December 2041	155,733.57	9,861.97	1,612,118.54	585,575.79
January 2042	151,710.33	9,483.52	1,577,320.06	570,648.94
February 2042	147,772.34	9,118.44	1,543,083.66	556,034.58
March 2042	143,917.96	8,766.30	1,509,401.22	541,726.73
April 2042	140,145.57	8,426.65	1,476,264.74	527,719.50
May 2042	136,453.57	8,099.08	1,443,666.33	514,007.13
June 2042	132,840.41	7,783.17	1,411,598.19	500,583.95
July 2042	129,304.54	7,478.53	1,380,052.66	487,444.41
August 2042	125,844.47	7,184.78	1,349,022.15	474,583.04
September 2042	122,458.71	6,901.54	1,318,499.18	461,994.49
October 2042	119,145.83	6,628.47	1,288,476.40	449,673.49
November 2042	115,904.38	6,365.22	1,258,946.53	437,614.88

<u>Distribution Date</u>	<u>Classes IA and LY (in the aggregate)</u>	<u>Classes HE, HN, HY and ZJ (in the aggregate)</u>	<u>Classes CF, PA and PB (in the aggregate)</u>	<u>Class PF</u>
December 2042	\$ 112,732.98	\$ 6,111.45	\$ 1,229,902.40	\$ 425,813.58
January 2043	109,630.26	5,866.83	1,201,336.94	414,264.63
February 2043	106,594.87	5,631.07	1,173,243.17	402,963.14
March 2043	103,625.49	5,403.84	1,145,614.22	391,904.30
April 2043	100,720.83	5,184.87	1,118,443.30	381,083.42
May 2043	97,879.61	4,973.87	1,091,723.72	370,495.86
June 2043	95,100.58	4,770.57	1,065,448.88	360,137.09
July 2043	92,382.52	4,574.69	1,039,612.26	350,002.67
August 2043	89,724.23	4,386.00	1,014,207.45	340,088.20
September 2043	87,124.52	4,204.23	989,228.11	330,389.42
October 2043	84,582.25	4,029.15	964,668.01	320,902.10
November 2043	82,096.26	3,860.53	940,520.97	311,622.10
December 2043	79,665.46	3,698.15	916,780.93	302,545.38
January 2044	77,288.73	3,541.79	893,441.89	293,667.95
February 2044	74,965.02	3,391.24	870,497.96	284,985.89
March 2044	72,693.26	3,246.30	847,943.29	276,495.37
April 2044	70,472.42	3,106.77	825,772.14	268,192.63
May 2044	68,301.49	2,972.47	803,978.85	260,073.97
June 2044	66,179.47	2,843.21	782,557.82	252,135.76
July 2044	64,105.38	2,718.82	761,503.55	244,374.43
August 2044	62,078.27	2,599.13	740,810.60	236,786.50
September 2044	60,097.19	2,483.97	720,473.60	229,368.54
October 2044	58,161.22	2,373.18	700,487.27	222,117.17
November 2044	56,269.46	2,266.61	680,846.40	215,029.10
December 2044	54,421.01	2,164.12	661,545.85	208,101.08
January 2045	52,615.01	2,065.55	642,580.54	201,329.93
February 2045	50,850.59	1,970.77	623,945.48	194,712.53
March 2045	49,126.92	1,879.64	605,635.74	188,245.80
April 2045	47,443.18	1,792.04	587,646.45	181,926.76
May 2045	45,798.56	1,707.84	569,972.82	175,752.44
June 2045	44,192.26	1,626.92	552,610.11	169,719.95
July 2045	42,623.51	1,549.16	535,553.68	163,826.45
August 2045	41,091.54	1,474.45	518,798.92	158,069.14
September 2045	39,595.61	1,402.68	502,341.30	152,445.30
October 2045	38,134.98	1,333.75	486,176.35	146,952.23
November 2045	36,708.93	1,267.54	470,299.66	141,587.30
December 2045	35,316.75	1,203.98	454,706.88	136,347.93
January 2046	33,957.75	1,142.95	439,393.73	131,231.58
February 2046	32,631.25	1,084.37	424,355.98	126,235.76
March 2046	31,336.58	1,028.15	409,589.47	121,358.03
April 2046	30,073.09	974.20	395,090.08	116,595.99
May 2046	28,840.14	922.44	380,853.77	111,947.29
June 2046	27,637.09	872.79	366,876.54	107,409.62
July 2046	26,463.33	825.18	353,154.45	102,980.72
August 2046	25,318.25	779.53	339,683.62	98,658.38
September 2046	24,201.26	735.76	326,460.22	94,440.40
October 2046	23,111.78	693.82	313,480.47	90,324.65

<u>Distribution Date</u>	<u>Classes IA and LY (in the aggregate)</u>	<u>Classes HE, HN, HY and ZJ (in the aggregate)</u>	<u>Classes CF, PA and PB (in the aggregate)</u>	<u>Class PF</u>
November 2046 .....	\$ 22,049.22	\$ 653.62	\$ 300,740.66	\$ 86,309.04
December 2046 .....	21,013.04	615.11	288,237.10	82,391.51
January 2047 .....	20,002.68	578.23	275,966.19	78,570.05
February 2047 .....	19,017.61	542.91	263,924.36	74,842.66
March 2047 .....	18,057.28	509.09	252,108.08	71,207.41
April 2047 .....	17,121.19	476.72	240,513.89	67,662.39
May 2047 .....	16,208.83	445.75	229,138.37	64,205.74
June 2047 .....	15,319.69	416.13	217,978.16	60,835.62
July 2047 .....	14,453.28	387.79	207,029.92	57,550.23
August 2047 .....	13,609.13	360.70	196,290.38	54,347.81
September 2047 .....	12,786.77	334.80	185,756.31	51,226.62
October 2047 .....	11,985.73	310.06	175,424.53	48,184.98
November 2047 .....	11,205.56	286.42	165,291.89	45,221.21
December 2047 .....	10,445.82	263.85	155,355.31	42,333.68
January 2048 .....	9,706.07	242.30	145,611.73	39,520.79
February 2048 .....	8,985.89	221.74	136,058.14	36,780.97
March 2048 .....	8,284.85	202.12	126,691.58	34,112.68
April 2048 .....	7,602.54	183.42	117,509.13	31,514.41
May 2048 .....	6,938.57	165.59	108,507.89	28,984.67
June 2048 .....	6,292.54	148.60	99,685.05	26,522.01
July 2048 .....	5,664.06	132.42	91,037.78	24,125.00
August 2048 .....	5,052.75	117.02	82,563.34	21,792.26
September 2048 .....	4,458.24	102.36	74,259.00	19,522.40
October 2048 .....	3,880.17	88.42	66,122.08	17,314.08
November 2048 .....	3,318.17	75.17	58,149.94	15,165.99
December 2048 .....	2,771.91	62.58	50,339.96	13,076.83
January 2049 .....	2,241.02	50.63	42,689.59	11,045.33
February 2049 .....	1,725.19	39.28	35,196.29	9,070.25
March 2049 .....	1,224.07	28.52	27,857.56	7,150.37
April 2049 .....	737.35	18.32	20,670.94	5,284.50
May 2049 .....	264.70	8.66	13,634.01	3,471.45
June 2049 .....	0.00	0.00	6,744.38	1,710.10
July 2049 and thereafter .....	0.00	0.00	0.00	0.00

Underlying Certificates

Trust Asset Subgroup	Issuer	Series	Class	Issue Date	CUSIP Number	Interest Rate	Interest Type(I)	Final Distribution Date	Principal Type(I)	Original Principal Balance of Class	Underlying Certificate Factor(2)	Principal Balance in Trust	Percentage of Class in Trust	Approximate Weighted 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
2A	Ginnie Mae	2019-023	PT(4)(5)	February 28, 2019	38381RUY3	3.5%	FIX	February 2049	PT	\$314,205,495	0.95625375	\$79,608,867	26.4956164240%	(5)	(5)	(5)	II
2B	Ginnie Mae	2019-052	A(4)	April 30, 2019	38381VDM9	3.5	FIX	April 2049	PT	101,290,782	0.96073263	97,313,359	100.0000000000	5.023%	349	6	II
2D	Ginnie Mae	2019-052	NT(4)	April 30, 2019	38381VHM5	6.5	FIX	April 2049	PT	98,629,341	0.98891548	24,349,836	24.9619523665	5.009	354	5	II
6B	Ginnie Mae	2019-084	DB(6)	July 30, 2019	38381XCV6	3.0	FIX	July 2049	PAC/AD	2,886,798	1.00000000	1,342,000	46.4874923704	4.511	357	3	II
7A	Ginnie Mae	2019-006	PL	January 30, 2019	38381BG57	3.5	FIX	January 2049	PAC I	2,462,000	1.00000000	2,462,000	100.0000000000	4.929	349	10	II
7A	Ginnie Mae	2019-023	PT(4)(5)	February 28, 2019	38381RUI1	3.5	FIX	February 2049	PAC	11,462,400	1.00000000	8,425,362	73.5043446399	(5)	(5)	(5)	II
7A	Ginnie Mae	2019-078	EL	June 28, 2019	38381WUX4	3.5	FIX	June 2049	PAC/AD	856,848	1.00000000	856,848	100.0000000000	4.957	356	3	II
7B	Ginnie Mae	2018-134	JC	October 30, 2018	38381AR57	4.0	FIX	October 2045	SEQ/AD	9,163,000	1.00000000	9,163,000	100.0000000000	4.974	347	11	II
7B	Ginnie Mae	2019-052	NK	April 30, 2019	38381VAVW0	4.0	FIX	April 2049	PAC/AD	3,598,000	1.00000000	2,058,162	57.2029460812	5.009	354	5	II

(1) As defined under “Class Types” in Appendix I to the Base Offering Circular.

(2) Underlying Certificate Factors are as of August 2019.

(3) Based on information as of August 2019.

(4) MX Class.

(5) Ginnie Mae 2019-023 Classes PD and PT are backed by the Ginnie Mae 2019-023 Subgroup 1A, Subgroup 1B and Subgroup 1C Trust Assets. These Trust Assets are backed, directly or indirectly, by certain mortgage loans whose approximate weighted characteristics are as follows:

Series	Trust Asset Subgroup	Approximate Weighted 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)
2019-023	Subgroup 1A Trust Assets	4.937%	348	10
2019-023	Subgroup 1B Trust Assets	4.969	350	10
2019-023	Subgroup 1C Trust Assets	4.980	351	7

(6) More than 10% of the Mortgage Loans underlying this Underlying Certificate may be higher balance Mortgage Loans. See “Risk Factors” in this Supplement.



**\$1,172,390,302**

**Government National  
Mortgage Association**

**GINNIE MAE<sup>®</sup>**

**Guaranteed REMIC  
Pass-Through Securities  
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Ginnie Mae REMIC Trust 2019-103**

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***OFFERING CIRCULAR SUPPLEMENT***  
**August 23, 2019**

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