

# Fannie Mae GeMS<sup>TM</sup> Guaranteed REMIC

# Fannie Mae Multifamily REMIC Trust 2016-M9

Structural and Collateral Term Sheet

\$1,153,377,417

(Approximate Offered Certificates)

Fannie Mae Pass-Through Certificates Series 2016-M9, Class FA, A1, A2, AB1 and AB2 Certificates

September 6, 2016

# Morgan Stanley

Lead Manager & Sole Bookrunner

Citigroup Co-Manager KGS-Alpha Capital Markets

Multi-Bank Securities Inc

# **Fannie Mae GeMS**<sup>TM</sup>

This information was prepared by Morgan Stanley sales, trading, banking or other non-research personnel. This is not a research report and the views or information contained herein should not be viewed as independent of the interest of Morgan Stanley trading desks. Such interest may conflict with your interests and recipients should be mindful of such potential conflicts of interest when reviewing this information. The views of the trading desk may differ from those of the Research Department or others at Morgan Stanley. Morgan Stanley may deal as principal in or own or act as market maker or liquidity provider for the securities/instruments (or related derivatives) mentioned herein. The trading desks may engage in a variety of trading activities (which may conflict with the position an investor may have) before or after providing this information, including accumulation of a position in the subject securities/instruments based on the information contained herein or otherwise. Morgan Stanley may also perform or seek to perform investment banking services for the issuers of the securities and instruments mentioned herein. Morgan Stanley is not a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice, including within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. Please see additional important information and qualifications at the end of this material.

#### IMPORTANT NOTICE REGARDING THE CONDITIONS FOR THIS OFFERING OF ASSET-BACKED SECURITIES

The asset-backed securities referred to in these materials are being offered when, as and if issued. In particular, you are advised that asset-backed securities, and the asset pools backing them, are subject to modification or revision (including, among other things, the possibility that one or more classes of securities may be split, combined or eliminated), at any time prior to issuance or availability of a final prospectus. As a result, you may commit to purchase securities that have characteristics that may change, and you are advised that all or a portion of the securities may not be issued that have the characteristics described in these materials. Our obligation to sell securities to you is conditioned on the securities and the underlying transaction having the characteristics described in these materials. If we determine that condition is not satisfied in any material respect, we will notify you, and neither the issuing entity nor the underwriter will have any obligation to you to deliver all or any portion of the securities which you have committed to purchase, and there will be no liability between us as a consequence of the non-delivery.

The information contained in the attached materials (the "Information") has been provided to Morgan Stanley & Co. LLC ("Morgan Stanley") by the Federal National Mortgage Association ("FNMA") and is preliminary and subject to change. The Information does not include all of the information required to be included in the prospectus supplement relating to the securities. As such, the Information may not reflect the impact of all structural characteristics of the securities. The assumptions underlying the Information, including structure and collateral, may be modified from time to time to reflect changed circumstances. Prospective purchasers are recommended to review the final prospectus supplement and the related base prospectus relating to the securities ("Offering Documents") discussed in this communication. Offering Documents contain data that is current as of their publication dates and after publication may no longer be complete or current. Final Offering Documents may be obtained from FNMA by calling toll free 1-800-237-8627 or Morgan Stanley by calling toll-free 1-866-718-1649.

#### IMPORTANT NOTICE RELATING TO AUTOMATICALLY GENERATED EMAIL DISCLAIMERS

Any legends, disclaimers or other notices that may appear at the bottom of this e-mail or at the bottom of the e-mail communication to which this material may have been attached are not applicable to these materials and should be disregarded. Such legends, disclaimers or other notices have been automatically generated as a result of these materials having been sent via Bloomberg or another email system.

### **Table of Contents**

### **Table of Contents**

Contact Information	4
Certificate Structure	
Issue Characteristics – Group 1	6
Issue Characteristics – Group 2	7
Structural Overview – Group 1	8
Structural Overview – Group 2	9
Collateral Overview – Group 1	
Collateral Overview – Group 2	11
Top 10 Mortgage Pools	12
Collateral Statistics – Group 1	13
Collateral Statistics – Group 1 (Continued)	14
Collateral Statistics – Group 2	15
Collateral Statistics – Group 2 (Continued)	

### **Contact Information**

### **Morgan Stanley**

CMBS Syndicate	Telephone	Email
Nishant Kapur	(212) 761-1483	nishant.kapur@morganstanley.com
Newland Baldwin	(212) 761-7265	newland.baldwin@morganstanley.com
Brandon Atkins	(212) 761-4846	brandon.atkins@morganstanley.com
Tony Giacin	(212) 761-2912	tony.giacin@morganstanley.com
CMBS Trading	Telephone	Email
John McGrath	(212) 761-9680	john.mcgrath1@morganstanley.com
Citigroup		
CMBS Syndicate	Telephone	Email
Paul Vanderslice	(212) 723-1295	paul.t.vanderslice@citi.com
Raul Orozco	(212) 723-1295	raul.d.orozco@citi.com
Matt Perry	(212) 723-1295	mattison.perry@citi.com
CMBS Trading	Telephone	Email
Jesse Eisen	(212) 723-6217	jesse.eisen@citi.com
CMBS Capital Markets	Telephone	Email
Tim Groves	(212) 816-8721	timothy.groves@citi.com
Michael Steele	(212) 816-2206	michael.steele@citi.com
Wendy Yam	(212) 816-5314	wendy.yam@citi.com
KGS-Alpha Capital Markets		
KGS-Alpha Capital Markets  Syndicate / Trading	Telephone	Email
	<b>Telephone</b> (646) 588-2120	<b>Email</b> ejacks@kgsalpha.com
Syndicate / Trading	•	
Syndicate / Trading Eric Jacks	(646) 588-2120	ejacks@kgsalpha.com
Syndicate / Trading  Eric Jacks  Kyle Wichser	(646) 588-2120 (646) 658-3931	ejacks@kgsalpha.com kwichser@kgsalpha.com
Syndicate / Trading  Eric Jacks  Kyle Wichser  Hasan Yoruk	(646) 588-2120 (646) 658-3931	ejacks@kgsalpha.com kwichser@kgsalpha.com
Syndicate / Trading  Eric Jacks  Kyle Wichser  Hasan Yoruk  Multi-Bank Securities Inc	(646) 588-2120 (646) 658-3931 (646) 560-7029	ejacks@kgsalpha.com kwichser@kgsalpha.com hyoruk@kgsalpha.com

This material was not prepared by the Morgan Stanley research department. Please refer to important information and qualifications at the end of this material.

**Certificate Structure** 

### **Certificate Structure**

Group	Class	Approximate Initial Certificate Balance or Notional Amount <sup>(1)</sup>	% of Initial Group Certificate Balance <sup>(2)</sup>	Expected Weighted Average Life (Years) <sup>(3)</sup>	Expected Principal Window (Months) <sup>(4)</sup>	Coupon Type	Pricing Speed
1	FA	\$579,564,135	100.00%	6.44	1 – 84	Floater/AFC <sup>(5)</sup>	0 CPY
1	FX <sup>(6)(7)</sup>	\$579,564,135	n/a	n/a	n/a	WAC IO <sup>(8)</sup>	100 CPY
2	A1	\$60,591,000	10.56%	5.77	1 – 113	Fixed	0 CPY
2	A2	\$444,364,282	77.44%	9.62	113 – 117	Fixed	0 CPY
2	AB1	\$8,263,000	1.44%	5.77	1 – 113	Fixed	0 CPY
2	AB2	\$60,595,000	10.56%	9.62	113 – 117	Fixed	0 CPY
2	X2 <sup>(7)(9)</sup>	\$573,813,282	n/a	n/a	n/a	WAC IO	100 CPY

- (1) The certificate balances and notional amounts are approximate and on the settlement date may vary by up to 5%. Underlying pools may be removed from or added to the mortgage pool prior to the settlement date within the same maximum permitted variance. Any reduction or increase in the aggregate principal balance of underlying pools within these parameters will result in changes to the initial certificate balance or notional amount of each class of certificates and to the other statistical data.
- (2) Approximate as of the settlement date.
- (3) Calculated at 0 CPY.
- (4) The expected principal window is expressed in months following the settlement date and reflects the period during which distributions of principal would be received at the Pricing Speed.
- (5) The Class FA coupon will be equal to 1 month LIBOR plus [ %] (but in no event less than [ %]), subject to a cap equal to the weighted average MBS Pass-Thru Rate of the Group 1 Collateral Pool for such distribution date.
- (6) The Class FX notional amount is equal to the principal certificate balance of Class FA.
- (7) Classes FX and X2 are not being offered.
- (8) The Class FX coupon will be equal to the positive difference, if any, between the weighted average MBS Pass-Thru Rate of the Group 1 Collateral Pool for such distribution date less the Class FA coupon for such distribution date.
- (9) The Class X2 notional amount is equal to the aggregate certificate balances of Classes A1, A2, AB1 and AB2.

**Issue Characteristics** 

### Issue Characteristics - Group 1

Securities: \$579,564,135 (approximate) monthly pay, variable-rate, multi-class, commercial

mortgage REMIC Pass-Through Certificates (Classes FA and FX).

Lead Manager & Sole Bookrunner: Morgan Stanley & Co. LLC

Co- Managers: Citigroup, KGS-Alpha Capital Markets and Multi-Bank Securities Inc

Issuer: Federal National Mortgage Association ("Fannie Mae")

Issuing Entity: Fannie Mae Multifamily REMIC Trust 2016-M9, a trust formed by Fannie Mae

Trustee: Fannie Mae

**Collateral Type:** Fannie Mae ARM 7-6™ Program Pools

Cut-Off Date: On or about September 1, 2016

Expected Pricing Date: Week of September 5, 2016

Expected Settle Date: September 30, 2016

Distribution Dates: The 25<sup>th</sup> calendar day of the month, or if such day is not a business day, the

following business day, commencing in October 2016.

Accrual: Each class will accrue interest on an actual/360 basis during the preceding calendar

month.

LIBOR Determination: 15 calendar day look back

**ERISA:** It is expected that all Offered Certificates will be ERISA eligible.

Tax Treatment: Double REMIC Series

Form of Offering: The certificates are exempt from registration under the Securities Act of 1933 and

are "exempted securities" under the Securities Exchange Act of 1934.

Offered Certificates: The Class FA Certificates

Optional Termination: None

Minimum Denominations: \$100,000 for Class FX and \$1,000 for class FA, \$1 in excess thereof.

Settlement Terms: Book-Entry except for Class R and RL

Analytics: Cash flows are expected to be available through Bloomberg, L.P., Intex Solutions,

Inc and Trepp LLC

Bloomberg Ticker: FNA 2016-M9 <MTGE><GO>

Risk Factors: THE CERTIFICATES INVOLVE CERTAIN RISKS AND MAY NOT BE SUITABLE

FOR ALL INVESTORS. SEE THE "RISK FACTORS" SECTION OF FANNIE MAE'S

MULTIFAMILY REMIC PROSPECTUS.

**Issue Characteristics** 

### Issue Characteristics - Group 2

Securities: \$573,813,282 (approximate) monthly pay, fixed-rate and variable-rate, multi-class,

commercial mortgage REMIC Pass-Through Certificates (Classes A1, A2, AB1,

AB2 and X2).

Lead Manager & Sole Bookrunner: Morgan Stanley & Co. LLC

Co- Managers: Citigroup, KGS-Alpha Capital Markets and Multi-Bank Securities Inc

Issuer: Federal National Mortgage Association ("Fannie Mae")

Issuing Entity: Fannie Mae Multifamily REMIC Trust 2016-M9, a trust formed by Fannie Mae

Trustee: Fannie Mae

Cut-Off Date: On or about September 1, 2016

Expected Pricing Date: Week of September 5, 2016

Expected Settle Date: September 30, 2016

Distribution Dates: The 25<sup>th</sup> calendar day of the month, or if such day is not a business day, the

following business day, commencing in October 2016.

Accrual: Each class will accrue interest on a 30/360 basis during the preceding calendar

month.

ERISA: It is expected that all Offered Certificates will be ERISA eligible.

Tax Treatment: Double REMIC Series

Form of Offering: The certificates are exempt from registration under the Securities Act of 1933 and

are "exempted securities" under the Securities Exchange Act of 1934.

Offered Certificates: The Class A1, Class A2, Class AB1 and Class AB2 Certificates.

Optional Termination: None

Minimum Denominations: \$100,000 for Class X2 and \$1,000 for Classes A1, A2, AB1 and AB2, \$1 in excess

thereof.

Settlement Terms: Book-Entry except for Class R and RL

Analytics: Cash flows are expected to be available through Bloomberg, L.P., Intex Solutions,

Inc and Trepp LLC

Bloomberg Ticker: FNA 2016-M9 <MTGE><GO>

Risk Factors: THE CERTIFICATES INVOLVE CERTAIN RISKS AND MAY NOT BE SUITABLE

FOR ALL INVESTORS. SEE THE "RISK FACTORS" SECTION OF FANNIE MAE'S

MULTIFAMILY REMIC PROSPECTUS.

### Structural Overview – Group 1

Amount of Distributions: On each Distribution Date, certificateholders will be entitled to receive interest and any principal

required to be paid on their certificates on such Distribution Date, distributed from funds available

for distribution from the Group 1 Collateral Pool.

Distribution of Principal: The Group 1 Principal Distribution Amount for any Distribution Date will be allocated as follows:

> 1. Scheduled and unscheduled principal payments included in the principal distribution for each Group 1 MBS, on an aggregate basis, to the FA Class, until retired.

Call Protection(1)(2)(3):

All 61 underlying pools (representing 100% of the Group 1 Collateral Pool) can be prepaid after an initial lockout term by paying a prepayment premium, generally equal to 1% of the outstanding principal loan balance, until the related prepayment premium end date, which is generally 90 days prior to loan maturity. If the required prepayment premium is 1% or less, it may be waived. No prepayment premiums will be passed through to certificateholders. All 61 underlying loans (representing 100% of the Group 1 Collateral Pool) have a remaining lockout term. The Group 1 Collateral Pool has a weighted average remaining lockout term of approximately 10 months and weighted average remaining lockout term plus prepayment premium term of approximately 79 months.

Guarantee: All underlying pools will be guaranteed by Fannie Mae with respect to the full and timely payment of

interest and principal. Fannie Mae's guarantee does not cover any prepayment premium payments

due on the underlying pools.

(1) Remaining prepayment premium term is calculated from the beginning of the month of the Cut-off Date to the prepayment premium end date and would be one month shorter if calculated from the end of the month of the Cut-off Date to the prepayment premium end date.

- (2) Remaining lockout term is calculated from the beginning of the month of the Cut-off Date to the lockout term end date and would be one month shorter if calculated from the end of the month of the Cut-off Date to the lockout term end date.
- (3) For more detail on collateral call protection, see Collateral Overview Group 1.

### Structural Overview - Group 2

#### Amount of Distributions:

On each Distribution Date, certificateholders will be entitled to receive interest and any principal required to be paid on their certificates on such Distribution Date, distributed from funds available for distribution from the related underlying Group 2 Collateral Pool.

### Distribution of Principal:

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

- Scheduled principal payments included in the principal distribution for each Group 2 MBS, on an aggregate basis, as follows:
  - a. The AB Pro Rata Percentage to the AB1 and AB2 Classes, in that order, until retired, and
  - The Non-AB Pro Rata Percentage to the A1 and A2 Classes, in that order, until retired.
- Unscheduled principal payments included in the principal distribution for each Group 2 MBS, on an aggregate basis, to the AB1, AB2, A1 and A2 Classes, in that order, until retired

The "AB Pro Rata Percentage" for any Distribution Date is equal to the percentage equivalent of a fraction, the numerator of which is the sum of the aggregate certificate balance of the AB1 and AB2 Classes immediately before the Distribution Date and the denominator of which is the aggregate certificate balance of the AB1, AB2, A1 and A2 Classes immediately before that date.

The "Non-AB Pro Rata Percentage" for any Distribution Date is equal to 100% minus the AB Pro Rata Percentage for that date.

# Distribution of Prepayment Premiums:

Any Group 2 prepayment premiums that are included in the related MBS distributions for any Distribution Date will be allocated to the AB1, AB2, A1, A2 and X2 Classes as follows:

- 1. to the AB1, AB2, A1 and A2 Classes as follows:
  - a. on each Distribution Date prior to the Distribution Date on which the aggregate certificate balance of the AB2 Class is retired, to each of the AB1 and AB2 Classes an amount equal to 30% of the Group 2 prepayment premiums multiplied by the percentage equivalent of a fraction, the numerator of which is the principal payable to that Class on that date and the denominator of which is the aggregate principal payable to the AB1 and AB2 Classes for that date, and
  - b. on each Distribution Date beginning with the Distribution Date on which the AB2 Class is retired, to each of the AB1, AB2, A1 and A2 Classes, an amount equal to 30% of the Group 2 prepayment premiums multiplied by the percentage equivalent of a fraction, the numerator of which is the principal payable to that Class on that date and the denominator of which is the Group 2 Principal Distribution Amount for that date;
- 2. to the X2 Class, an amount equal to 70% of the Group 2 prepayment premiums for that Distribution Date.

### Call Protection(1)(2):

70 underlying pools (representing 100% of the Group 2 Collateral Pool) provide for a remaining yield maintenance prepayment premium term. The Group 2 Collateral Pool has a weighted average remaining yield maintenance prepayment premium term of 110 months.

#### Guarantee:

All underlying pools will be guaranteed by Fannie Mae with respect to the full and timely payment of interest and principal. Fannie Mae's guarantee does not cover any prepayment premium payments due on the underlying pools.

- (1) Remaining yield maintenance prepayment premium term is calculated from the beginning of the month of the Cut-off Date to the yield maintenance end date / prepayment premium end date and would be one month shorter if calculated from the end of the month of the Cut-off Date to the yield maintenance end date / prepayment premium end date.
- (2) For more detail on collateral call protection, see Collateral Overview Group 2.

### Collateral Overview - Group 1(1)(2)

**Fannie Mae ARM 7-6™ Program:** Collateral Group 1 comprises 61 loans all originated under Fannie Mae's ARM 7-6™ program. All loans are 1-month LIBOR floaters with 6% lifetime Pass-through caps and 1% periodic caps.

**Call Protection:** The Mortgage Loans are locked out from prepayment during the first 12 months following origination. Thereafter, the loans can be prepaid by paying a prepayment premium, generally equal to 1% of the outstanding principal loan balance, until the Prepayment Premium End Date, which is generally 90 days prior to loan maturity (prepayment premiums collected are not passed through to the investor).

**Conversion:** The underlying loan in a FNMA ARM 7-6TM MBS may be converted to a fixed rate loan on any rate change date beginning on the first day of the second loan year and ending on the first day of the sixth loan year, provided the loan has not been delinquent during the previous 12 months and the borrower is not in default under any loan documents. At the time of conversion, the loan is removed from the MBS, the MBS is terminated, there is no prepayment premium charged, and the MBS investor is paid off at par. More information on the Fannie Mae ARM 7-6TM loans can be found by visiting Fannie Mae's website at:

https://www.efanniemae.com/mf/finsolutions/rateopsfeats/pdf/arm76.pdf

Aggregate Cut-Off Date Principal Balance:	\$579,564,136
Number of Mortgage Pools:	61
Average Cut-Off Date Balance per Mortgage Pool:	\$9,501,051
Number of Mortgaged Properties:	61
% of Group 1 Secured by 5 Largest Mortgage Pools:	21.39%
% of Group 1 Secured by 10 Largest Mortgage Pools:	34.89%
Weighted Average Original Term to Maturity (months):	84
Weighted Average Remaining Term to Maturity (months):	82
Weighted Average Seasoning (months):	2
Weighted Average Original Amortization Term (months) <sup>(3)</sup> :	360
Weighted Average Remaining Amortization Term (months) <sup>(3)</sup> :	359
Weighted Average Remaining Prepayment Premium Term <sup>(4)</sup> :	79
Weighted Average Net Margin:	1.086%
Weighted Average Pass-Through Cap:	6.000%
Weighted Average Periodic Cap (+/-):	1.000%
% of Group 1 Interest Only followed by Amortizing Balloon:	38.5%
% of Group 1 Interest Only:	3.5%
% of Group 1 Amortizing Balloon:	58.0%

More information regarding the DUS MBS program can be found on Fannie Mae's website at: http://www.fanniemae.com/resources/file/mbs/pdf/mbsenger 25yrs.pdf

<sup>(1)</sup> Unless otherwise indicated, all references to "% of Group 1" in this Term Sheet reflect a percentage of the Group 1 aggregate Cut-off Date Principal Balance, after application of all payments of principal due during or prior to September 2016.

<sup>(2)</sup> The Group 1 Collateral Pool consists of 61 FNMA multifamily MBS pools. All loans underlying the pools are monthly-pay, variable-rate multifamily mortgages.

<sup>(3)</sup> Excludes pools that are interest-only for the entire term.

<sup>(4)</sup> Remaining prepayment premium term is calculated from the beginning of the month of the Cut-off Date to the prepayment premium end date and would be one month shorter if calculated from the end of the month of the Cut-off Date to the prepayment premium end date.

**Collateral Overview** 

### Collateral Overview - Group 2(1)(2)

Aggregate Cut-Off Date Principal Balance:	\$573,813,282
Number of Mortgage Pools:	70
Average Cut-Off Date Balance per Mortgage Pool:	\$8,197,333
Number of Mortgaged Properties:	70
Approximate Weighted Average Initial Pass-Through Rate:	2.697%
Weighted Average Mortgage Note Rate:	4.008%
% of Group 2 Secured by 5 Largest Mortgage Pools:	32.19%
% of Group 2 Secured by 10 Largest Mortgage Pools:	42.46%
Weighted Average Original Term to Maturity (months):	120
Weighted Average Remaining Term to Maturity (months):	116
Weighted Average Seasoning (months):	4
Weighted Average Original Amortization Term (months) <sup>(3)</sup> :	359
Weighted Average Remaining Amortization Term (months) <sup>(3)</sup> :	358
Weighted Average Remaining Prepayment Premium Term <sup>(4)</sup> :	110
% of Group 2 Amortizing Balloon:	22.6%
% of Group 2 Interest Only followed by Amortizing Balloon:	64.5%
% of Group 2 Interest Only:	12.4%
% of Group 2 Fully Amortizing:	0.5%

### More information regarding the DUS MBS program can be found on Fannie Mae's website at:

http://www.fanniemae.com/resources/file/mbs/pdf/mbsenger\_25yrs.pd

<sup>(1)</sup> Unless otherwise indicated, all references to "% of Group 2" in this Term Sheet reflect a percentage of the Group 2 aggregate Cut-off Date Principal Balance, after application of all payments of principal due during or prior to September 2016.

<sup>(2)</sup> The Group 2 Collateral Pool consists of 70 FNMA multifamily MBS pools. All loans underlying the pools are monthly-pay, fixed-rate multifamily mortgages.

<sup>(3)</sup> Excludes pools that are interest-only for the entire term.

<sup>(4)</sup> Remaining prepayment premium term is calculated from the beginning of the month of the Cut-off Date to the yield maintenance end date / prepayment premium end date and would be one month shorter if calculated from the end of the month of the Cut-off Date to the yield maintenance end date / prepayment premium end date.

### **Top 10 Mortgage Pools**

Top 10 MBS Pools - Group 1

Loan No.	Pool Number	Property Name	City	State	Property Type	Cut-off Date Balance	% of Group 1	LTV	DSCR <sup>(1)</sup>
1	AN2260	The Polos	Gainesville	FL	Dedicated Student	\$29,652,871	5.12%	73.1%	1.83x
2	AN1988	VILLAS DE PALMAS	Houston	TX	Multifamily	\$29,503,800	5.09%	75.0%	2.95x
3	AN2264	Lexington Crossing Apartments	Gainesville	FL	Dedicated Student	\$25,167,563	4.34%	71.7%	1.76x
4	AN1623	DORADO PLAZA APARTMENTS	San Diego	CA	Multifamily	\$20,122,587	3.47%	60.8%	1.63x
5	AN1981	Sandpiper Apartments	Warner Robins	GA	Multifamily	\$19,534,845	3.37%	80.0%	1.76x
6	AN2614	Broadmead Apartments	Houston	TX	Multifamily	\$17,000,000	2.93%	70.0%	2.74x
7	AN2407	Wyndham Hill Apartments	Grand Rapids	MI	Multifamily	\$15,648,000	2.70%	74.8%	2.79x
8	AN2320	Casa Del Rio Apartments	Jacksonville	FL	Multifamily	\$15,553,895	2.68%	75.0%	1.87x
9	AN2192	Bedford Park Apartments	Atlanta	GA	Multifamily	\$15,100,513	2.61%	75.0%	1.71x
10	AN2281	Magnolia Creek Apartments	Dallas	TX	Multifamily	\$14,950,578	2.58%	75.0%	1.70x
		Total/Weighte	ed Avg.			\$202,234,652	34.89%	72.9%	2.09x

<sup>(1)</sup> Most Recent Annual DSCR calculations are based on the underwritten DSCR for the related mortgage loan. DCSRs for full term and partial interest-only loans are based on interest-only payments.

Top 10 MBS Pools - Group 2

Loan No.	Pool Number	Property Name	City	State	Property Type	Cut-off Date Balance	% of Group 2	LTV	DSCR <sup>(1)</sup>
1	AN0499	River View Apartments 1	San Jose	CA	Multifamily	\$79,384,020	13.83%	55.0%	1.36x
2	AN0500	River View Apartments 2	San Jose	CA	Multifamily	\$59,943,015	10.45%	57.0%	1.35x
3	AN1294	Independence Village of Brighton Valley	Brighton	MI	Seniors	\$17,500,000	3.05%	73.0%	1.39x
4	AN1621	The Royal St. Moritz	Grapevine	TX	Multifamily	\$15,275,000	2.66%	65.0%	1.38x
5	AN1461	The Andover	New York	NY	Multifamily	\$12,591,280	2.19%	45.3%	2.06x
6	AN1704	French Quarter Apartments	Wichita Falls	TX	Multifamily	\$12,080,000	2.11%	80.0%	1.38x
7	AN1752	Aspen Creek Apartments	Dallas	TX	Multifamily	\$12,023,000	2.10%	79.9%	1.30x
8	AN1501	Wellington Club	Lake Worth	FL	Multifamily	\$11,880,000	2.07%	69.6%	1.33x
9	AN1694	Park at Ventana	San Antonio	TX	Multifamily	\$11,570,000	2.02%	65.0%	1.46x
10	AN1912	Arbor Knoll Apartments	Ypsilanti	MI	Multifamily	\$11,418,591	1.99%	55.0%	1.81x
		Total/Weighte	ed Avg.			\$243,664,906	42.46%	60.6%	1.42x

<sup>(1)</sup> Most Recent Annual DSCR calculations are based on the most recent data using amortizing debt service payments with the exception of the full-term interest-only pools, which are based on interest-only payments.

### Collateral Statistics - Group 1 (1)

### Cut-off Date Balance (\$)

			Cut-Off Date	
		No. of	Principal	% of
		Pools	Balance (\$)	Group
2,338,987 -	4,000,000	8	23,875,690	4.1
4,000,001 -	6,000,000	10	47,500,520	8.2
6,000,001 -	8,000,000	16	111,994,428	19.3
8,000,001 -	10,000,000	6	53,858,855	9.3
10,000,001	- 12,000,000	5	56,856,708	9.8
12,000,001	- 14,000,000	4	53,681,956	9.3
14,000,001	- 16,000,000	6	90,814,313	15.7
16,000,001	- 18,000,000	1	17,000,000	2.9
18,000,001	- 20,000,000	1	19,534,845	3.4
20,000,001	- 29,652,871	4	104,446,821	18.0
Total:		61	\$579,564,136	100.0%
Min:	\$2,338,987	Max: \$29,652,871	Average:	\$9,501,051

#### Original Term to Maturity (mos)

				Cut-Off Date	
			No. of	Principal	% of
			Pools	Balance (\$)	Group
84			61	579,564,136	100.0
Total:			61	\$579,564,136	100.0%
Min:	84	Max:	84	Wtd Avg:	84

#### Remaining Term to Maturity (mos)

			Cut-Off Date					
			No. of	Principal	% of			
			Pools	Balance (\$)	Group			
80			9	75,272,922	13.0			
81			13	83,609,679	14.4			
82			22	267,883,277	46.2			
83			16	138,998,257	24.0			
84			1	13,800,000	2.4			
Total:			61	\$579,564,136	100.0%			
Min:	80	Max:	84	Wtd Avg:	82			

### Original Amortization Term (mos)

			Cut-Off Date	
		No. of	Principal	% of
		Pools	Balance (\$)	Group
Interest Only		2	20,300,000	3.5
360		59	559,264,136	96.5
Total:		61	\$579,564,136	100.0%
Non-Zero Min: 360	Max:	360	Non-Zero Wtd Avg:	360

### Remaining Amortization Term (mos)

			Cut-Off Date	
		No. of	Principal	% of
		Pools	Balance (\$)	Group
Interest Only		2	20,300,000	3.5
356		6	46,761,922	8.1
357		7	44,357,679	7.7
358		13	180,903,477	31.2
359		9	64,243,257	11.1
360		24	222,997,800	38.5
Total:		61	\$579,564,136	100.0%
Non-Zero Min: 356	Max:	360	Non-Zero Wtd Av	359

#### **Property Type**

		Cut-Off Date	
	No. of	Principal	% of
	Pools	Balance (\$)	Group
Multifamily	57	507,056,964	87.5
Dedicated Student	2	54,820,433	9.5
Military	1	14,860,319	2.6
Seniors	1	2,826,420	0.5
Total:	61	\$579,564,136	100.0%

#### Weighted Average ARM Gross Margin (%)

				Cut-off Date	
			No. of	Principal	% of
			Pools	Balance (\$)	Group
2.290 - 2.500			22	214,560,474	37.0
2.501 - 2.700			17	189,059,002	32.6
2.701 - 2.900			11	90,074,503	15.5
2.901 - 3.100			7	65,232,303	11.3
3.101 - 3.300			3	12,921,243	2.2
3.301 - 3.430			1	7,716,611	1.3
Total:			61	\$579,564,136	100.0%
Min:	2.290%	Max:	3.430%	Wtd Avg:	2.640%

#### Weighted Average ARM Net Margin (%)

				Cut-Off Date	
			No. of	Principal	% of
			Pools	Balance (\$)	Group
0.800 - 0.900			5	55,289,210	9.5
0.901 - 1.000			21	230,031,958	39.7
1.001 - 1.100			13	115,964,679	20.0
1.101 - 1.200			9	59,333,394	10.2
1.201 - 1.300			6	57,181,264	9.9
1.301 - 1.750			7	61,763,630	10.7
Total:			61	\$579,564,136	100.0%
Min:	0.800%	Max:	1.750%	Wtd Avg:	1.086%

### Collateral Statistics - Group 1 (Continued)(1)

Origination Date LTV Ratio (%)

				Cut-Off Date	
			No. of	Principal	% of
			Pools	Balance (\$)	Group
23.8 - 30.0			1	13,500,000	2.3
30.1 - 35.0			0	0	0.0
35.1 - 40.0			0	0	0.0
40.1 - 45.0			0	0	0.0
45.1 - 50.0			1	5,151,428	0.9
50.1 - 55.0			1	11,361,000	2.0
55.1 - 60.0			3	20,511,420	3.5
60.1 - 65.0			19	144,223,702	24.9
65.1 - 70.0			6	74,654,419	12.9
70.1 - 75.0			16	203,169,620	35.1
75.1 - 80.0			14	106,992,547	18.5
Total:			61	\$579,564,136	100.0%
Min:	23.8%	Max:	80.0%	Wtd Avg:	69.4%

Day	Cou	nt
-----	-----	----

		Cut-Off Date	
	No. of	Principal	% of
	Pools	Balance (\$)	Group
Actual/360	61	579,564,136	100.0
Total:	61	\$579,564,136	100.0%

#### State

		Cut-Off Date	
	No. of	Principal	% of
	Pools	Balance (\$)	Group
Texas	23	206,485,012	35.6
Georgia	9	89,039,383	15.4
Florida	5	83,036,272	14.3
California	3	37,828,158	6.5
Michigan	4	35,233,000	6.1
Tennessee	2	18,050,000	3.1
New York	2	16,153,167	2.8
Oregon	1	14,701,007	2.5
Nevada	2	14,678,657	2.5
South Carolina	1	13,800,000	2.4
Washington	1	13,120,861	2.3
Indiana	1	8,306,000	1.4
Mississippi	2	7,775,061	1.3
Colorado	1	7,670,000	1.3
Alabama	1	4,296,989	0.7
Pennsylvania	1	4,224,000	0.7
Virginia	1	2,826,420	0.5
North Carolina	1	2,340,151	0.4
Total:	61	\$579,564,136	100.0%

#### Most Recent Annual DSCR (2)

				Cut-Off Date	
			No. of	Principal	% of
			Pools	Balance (\$)	Group
1.29x - 1.35x			3	34,166,439	5.9
1.36x - 1.60x			4	32,961,486	5.7
1.61x - 1.85x			22	225,659,410	38.9
1.86x - 2.10x			4	34,302,176	5.9
2.11x - 2.35x			3	20,537,826	3.5
2.36x - 2.60x			0	0	0.0
2.61x - 2.85x			4	50,454,000	8.7
2.86x - 3.10x			9	101,676,800	17.5
3.11x - 3.35x			4	23,867,500	4.1
3.36x - 3.60x			6	31,188,500	5.4
3.61x - 3.94x			2	24,750,000	4.3
Total:			61	\$579,564,136	100.0%
Min:	1.29x	Max:	3.94x	Wtd Avg:	2.27x

#### Loan Age (mos)

				Cut-Off Date	
			No. of	Principal	% of
			Pools	Balance (\$)	Group
0			1	13,800,000	2.4
1			16	138,998,257	24.0
2			22	267,883,277	46.2
3			13	83,609,679	14.4
4			9	75,272,922	13.0
Total:			61	\$579,564,136	100.0%
Min:	0	Max:	4	Wtd Avg:	2

### **Prefix Type**

		Cut-Off Date	
	No. of	Principal	% of
	Pools	Balance (\$)	Group
HA	56	531,210,278	91.7
HR	5	48,353,858	8.3
Total:	61	\$579,564,136	100.0%

### Remaining Prepayment Premium Term (mos)

				Cut-Off Date	
			No. of	Principal	% of
			Pools	Balance (\$)	Group
77			9	75,272,922	13.0
78			13	83,609,679	14.4
79			22	267,883,277	46.2
80			16	138,998,257	24.0
81			1	13,800,000	2.4
Total:			61	\$579,564,136	100.0%
Min:	77	Max:	81	Wtd Avg:	79

<sup>(1)</sup> Totals may not add to 100% due to rounding.

<sup>(2)</sup> Most Recent Annual DSCR calculations are based on the underwritten DSCR for the related mortgage loan. DSCRs for full term and partial interest-only loans are based on interest-only payments.

### Collateral Statistics - Group 2 (1)

#### Cut-off Date Balance (\$)

				Cut-off Date	
			No. of	Principal	% of
			Pools	Balance	Group
597,476 - 2	,000,000		13	16,911,043	2.9
2,000,001-	4,000,000		8	20,361,286	3.5
4,000,001-	6,000,000		15	76,742,779	13.4
6,000,001-	8,000,000		9	64,163,556	11.2
8,000,001-	10,000,000		5	42,558,000	7.4
10,000,001-	- 12,000,000		13	144,280,303	25.1
12,000,001-	- 14,000,000		3	36,694,280	6.4
14,000,001-	- 16,000,000		1	15,275,000	2.7
16,000,001-	- 18,000,000		1	17,500,000	3.0
18,000,001-	- 79,384,020		2	139,327,035	24.3
Total:	-		70	\$573,813,282	100.0%
Min:	\$597,476	Max:	\$79.384.020	Average:	\$8.197.333

### Original Term to Maturity (mos)

•g	• · · · · · · · · · · · · · · · · · · ·	,			
				Cut-off Date	
			No. of	Principal	% of
			Pools	Balance	Group
12	20		70	573,813,282	100.0
Total:		•	70	\$573,813,282	100.0%
Min:	120	Max:	120	Wtd Avg:	120

#### Remaining Term to Maturity (mos)

			Cut-off Date			
			No. of	Principal	% of	
			Pools	Balance	Group	
113			2	139,327,035	24.3	
114			2	6,770,000	1.2	
115			3	21,690,020	3.8	
116			25	152,745,845	26.6	
117			38	253,280,381	44.1	
Total:			70	\$573,813,282	100.0%	
Min:	113	Max:	117	Wtd Avg:	116	

### Current Mortgage Rate (%)

		Cut-off Date	
	No. of	Principal	% of
	Pools	Balance	Group
3.330 - 3.500	2	19,525,000	3.4
3.501- 3.750	10	191,004,319	33.3
3.751- 4.000	15	86,868,007	15.1
4.001- 4.250	17	119,424,739	20.8
4.251- 4.500	21	128,148,347	22.3
4.501- 4.760	5	28,842,870	5.0
Total:	70	\$573,813,282	100.0%
Min: 3.330% Max	4.760%	Wtd Avg:	4.008%

#### **Property Type**

		Cut-off Date	
	No. of	Principal	% of
	Pools	Balance	Group
Multifamily	50	473,275,643	82.5
Manufactured Housing	10	60,968,269	10.6
Seniors	1	17,500,000	3.0
Cooperative	7	12,704,383	2.2
Dedicated Student	1	6,590,000	1.1
Military	1	2,774,988	0.5
Total:	70	\$573,813,282	100.0%

### Original Amortization Term (mos)

			Cut-off Date	
		No. of	Principal	% of
		Pools	Balance	Group
Interest Only		8	71,035,170	12.4
120		1	3,090,020	0.5
240		1	2,827,215	0.5
360		56	488,889,689	85.2
420		2	4,779,016	8.0
480		2	3,192,172	0.6
Total:		70	\$573,813,282	100.0%
Non-Zero Min: 120	Max:	480	Non-Zero Wtd Avg:	359

#### Remaining Amortization Term (mos)

			Cut-off Date	
		No. of	Principal	% of
		Pools	Balance	Group
Interest Only		8	71,035,170	12.4
115 - 240		2	5,917,235	1.0
241- 360		56	488,889,689	85.2
361- 477		4	7,971,188	1.4
Total:		70	\$573,813,282	100.0%
Non-Zero Min: 115	Max:	477	Non-Zero Wtd Avg:	358

#### Pass Through Rate (%)

			Cut-off Date	
		No. of	Principal	% of
		Pools	Balance	Group
2.370 - 2.500		9	77,968,616	13.6
2.501- 2.600		20	140,308,037	24.5
2.601- 2.700		21	146,924,374	25.6
2.701- 2.800		10	48,305,632	8.4
2.801- 2.900		2	6,442,564	1.1
2.901- 3.000		8	153,864,060	26.8
Total:		70	\$573,813,282	100.0%
Min: 2.370%	Max:	2.970%	Wtd Avg:	2.697%

(1) Totals may not add to 100% due to rounding.

### Collateral Statistics - Group 2 (Continued)(1)

Origination Date LTV Ratio (%)

				Cut-off Date	
			No. of	Principal	% of
			Pools	Balance	Group
5.3 - 15.0			5	8,020,665	1.4
15.1 - 25.0			1	2,194,609	0.4
25.1- 35.0			0	0	0.0
35.1- 45.0			2	14,176,105	2.5
45.1- 55.0			11	143,572,372	25.0
55.1- 65.0			15	156,327,549	27.2
65.1- 75.0			24	155,976,819	27.2
75.1- 85.0			12	93,545,164	16.3
Total:			70	\$573,813,282	100.0%
Min:	5.3%	Max:	80.0%	Wtd Avg:	63.8%

**Day Count** 

		Cut-off Date	
	No. of	Principal	% of
	Pools	Balance	Group
Actual/360	70	573,813,282	100.0
Total:	70	\$573,813,282	100.0%

State

		Cut-off Date	
	No. of	Principal	% of
	Pools	Balance	Group
California	9	198,375,105	34.6
Texas	14	127,402,300	22.2
New York	10	41,138,931	7.2
Michigan	5	38,605,896	6.7
Ohio	3	20,765,693	3.6
Virginia	6	20,484,975	3.6
Florida	3	15,754,988	2.7
Kansas	2	12,101,000	2.1
Tennessee	2	11,141,180	1.9
Arizona	2	10,600,000	1.8
Oregon	1	10,457,141	1.8
Minnesota	1	8,868,000	1.5
Washington	1	8,250,000	1.4
Missouri	1	7,663,000	1.3
Massachusetts	1	7,560,000	1.3
North Carolina	1	6,590,000	1.1
Indiana	1	6,295,000	1.1
Montana	1	5,530,031	1.0
Georgia	1	5,445,000	0.9
Maryland	1	5,000,000	0.9
Illinois	1	2,827,215	0.5
Kentucky	2	1,632,827	0.3
New Mexico	1	1,325,000	0.2
Total:	70	\$573,813,282	100.0%

Most Recent Annual DSCR(2)

			Cut-off Date	
		No. of	Principal	% of
		Pools	Balance	Group
1.25x		7	54,903,902	9.6
1.26x - 1.50x		30	359,584,292	62.7
1.51x - 1.75x		10	43,615,931	7.6
1.76x - 2.00x		4	24,565,579	4.3
2.01x - 2.50x		10	58,914,195	10.3
2.51x - 3.00x		3	22,014,109	3.8
4.00x - 20.97x		6	10,215,274	1.8
Total:		70	\$573,813,282	100.0%
Min: 1.25x	Max:	20.97x	Wtd Avg:	1.67x

Loan Age (mos)

				Cut-off Date	
			No. of	Principal	% of
			Pools	Balance	Group
3			38	253,280,381	44.1
4			25	152,745,845	26.6
5			3	21,690,020	3.8
6			2	6,770,000	1.2
7			2	139,327,035	24.3
Total:			70	\$573,813,282	100.0%
Min:	3	Max:	7	Wtd Avg:	4

**Prefix Type** 

		Cut-off Date		
	No. of	Principal Balance	% of Group	
	Pools			
HY	69	570,723,262	99.5	
HN	1	3,090,020	0.5	
Total:	70	\$573,813,282	100.0%	

Remaining Prepayment Premium Term (mos)

				Cut-off Date Principal Balance	% of Group
			No. of Pools		
107			2	139,327,035	24.3
108			2	6,770,000	1.2
109			3	21,690,020	3.8
110			25	152,745,845	26.6
111			38	253,280,381	44.1
Total:			70	\$573,813,282	100.0%
Min:	107	Max:	111	Wtd Avg:	110

<sup>(1)</sup> (2)

Totals may not add to 100% due to rounding.

Most Recent Annual DSCR calculations are based on the most recent data using amortizing debt service payments with the exception of the full-term interest-only pools, which are based on interest-only payments

**Disclaimer** 

This material was prepared by sales, trading, banking or other non-research personnel of one of the following: Morgan Stanley & Co. LLC, Morgan Stanley & Co. International plc, Morgan Stanley Asia Limited and/or Morgan Stanley MUFG Securities Co., Ltd., and/or Morgan Stanley Capital Group Inc. (together with their affiliates, hereinafter "Morgan Stanley"). This material was not produced by a Morgan Stanley research analyst, although it may refer to a Morgan Stanley research analyst or research report. Unless otherwise indicated, these views (if any) are the author's and may differ from those of the Morgan Stanley fixed income or equity research department or others in the firm.

This material may have been prepared by or in conjunction with Morgan Stanley trading desks that may deal as principal in or own or act as market maker or liquidity provider for the securities/instruments (or related derivatives) mentioned herein. The trading desk may have accumulated a position in the subject securities/instruments based on the information contained herein. Trading desk materials are not independent of the proprietary interests of Morgan Stanley, which may conflict with your interests. Morgan Stanley may also perform or seek to perform investment banking services for the issuers of the securities and instruments mentioned herein.

The information contained in this material is subject to change, completion or amendment from time to time, and the information in this material supersedes information in any other communication relating to the securities referred to in this material.

Prospective purchasers are advised to review the Final Prospectus Supplement and the related Base Prospectus ("Offering Documents") relating to the securities discussed in these materials. The Offering Documents contain data that is current as of their publication dates and after publication may no longer be complete or current. Final Offering Documents may be obtained from Fannie Mae by calling toll free 1-800-237-8627 or by calling Morgan Stanley toll free at 1-866-718-1649.

This material is not a solicitation to participate in any trading strategy, and is not an offer to sell any security or instrument or a solicitation of an offer to buy or sell any security or instrument in any jurisdiction where the offer, solicitation or sale is not permitted.

Unless otherwise set forth in this material, any securities referred to in this material may not have been registered under the U.S. Securities Act of 1933, as amended, and, if not, may not be offered or sold absent an exemption therefrom. Recipients are required to comply with any legal or contractual restrictions on their purchase, holding, sale, exercise of rights or performance of obligations under any securities/instruments transaction.

The securities/instruments discussed in this material may not be suitable for all investors. This material has been prepared and issued by Morgan Stanley for intended distribution to market professionals and institutional investor clients. Other recipients should seek independent investment advice prior to making any investment decision based on this material. This material does not provide individually tailored investment advice or offer tax, regulatory, accounting or legal advice. Prior to entering into any proposed transaction, recipients should determine, in consultation with their own investment, legal, tax, regulatory and accounting advisors, the economic risks and merits, as well as the legal, tax, regulatory and accounting characteristics and consequences, of the transaction. You should consider this material as only a single factor in making an investment decision.

The value of and income from investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in securities/instruments transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized. Actual events may differ from those assumed and changes to any assumptions may have a material impact on any projections or estimates. Other events not taken into account may occur and may significantly affect the projections or estimates. Certain assumptions may have been made for modeling purposes only to simplify the presentation and/or calculation of any projections or estimates, and Morgan Stanley does not represent that any such assumptions will reflect actual future events. Accordingly, there can be no assurance that estimated returns or projections will be realized or that actual returns or performance results will not materially differ from those estimated herein. Some of the information contained in this document may be aggregated data of transactions in securities or other financial instruments executed by Morgan Stanley that has been compiled so as not to identify the underlying transactions of any particular customer.

Notwithstanding anything herein to the contrary, Morgan Stanley and each recipient hereof agree that they (and their employees, representatives, and other agents) may disclose to any and all persons, without limitation of any kind from the commencement of discussions, the U.S. federal and state income tax treatment and tax structure of the transaction and all materials of any kind (including opinions or other tax analyses) that are provided to it relating to the tax treatment and tax structure. For this purpose, "tax structure" is limited to facts relevant to the U.S. federal and state income tax treatment of the transaction and does not include information relating to the identity of the parties, their affiliates, agents or advisors.

In the UK, this communication is directed to those persons who are market counterparties or intermediate customers (as defined in the UK Financial Services Authority's rules). In Japan, this communication is directed to the sophisticated institutional investors as defined under the Foreign Broker Dealer Law of Japan and the ordinances thereunder. The trademarks and service marks contained herein are the property of their respective owners.

This material may not be sold or redistributed without the prior written consent of Morgan Stanley.