

Single-Family Rental Research

Performance Summary Covering All DBRS Morningstar-Rated Securitizations

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Authors:

Monte Bays | Vice President | monte.bays@morningstar.com | +1 646 560-4536 Bhumika Lamba | Analyst | bhumika.lamba@morningstar.com | +91 22 6121 7213

Analytical Manager:

Stephen Buteau | Managing Director | stephen.buteau@morningstar.com | +1 646 560-4557

Introduction

The blended rent change for single-borrower, single-family rental securitizations rated by Morningstar Credit Ratings, LLC (DBRS Morningstar) increased by 4.3% in September, down from a 4.4% increase in August. The average vacancy rate increased to 5.2% in September from a revised 4.6% in August, the highest it has been in the trailing12 months. The average retention rate for expiring leases increased to 78.7% in August, the latest month for which data is available, from 78.5% in July. Among the top 20 metropolitan statistical areas, the Denver-Aurora MSA continued to have the highest vacancy rate at 9.8%, followed by the Fort Lauderdale MSA with a 7.1% vacancy rate. The Phoenix MSA continued to have the highest blended rent growth at 7.5% and has been at or over 7.0% for the past nine months, followed by the Sacramento MSA at 6.8%. The Fort Lauderdale and Chicago MSAs experienced the lowest blended rent growth at 2.3% each. Rents for properties included in single-family rental securitizations are generally within 5.0% of the RentRange rents for properties located in the same MSAs with the exception of the Tampa MSA, which is approximately 7.1% less than the RentRange rents. With HPA 2016-2 paying down and PRD 2019-SFR3 starting to report its monthly property schedule from this month, the October Single-Family Rental Performance Summary has 23 single-borrower deals with close to 79,000 properties.

DBRS Morningstar publishes its performance summary to provide market participants detailed property-level information on each single-family rental securitization that DBRS Morningstar has rated. The data below summarizes issuer-reported property-level information through September. Page 6 includes a summary of the multiborrower transactions. For deals

seasoned at least one year, we provide DBRS Morningstar Surveillance Analysis reports, available on our website, www.morningstarcreditratings.com.

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Single-Borrower Performance

Lease expirations declined to 6.1% in September, down from a revised 7.5% in August. For seasoned transactions, PRD 2018-SFR1 had the highest lease expirations at 9.6%, followed by IH 2018-SFR1 at 8.4%. HPA 2019-1 had the lowest percentage of lease expirations at 0.1%. The decrease in lease expirations on single-family rental properties continues to follow seasonal trends of increasing in the spring and summer months before starting to decline going into the fall season.

The average retention rate on full-term leases increased to 78.7% in August, the latest month for which data is available, from 78.5% in July. The overall monthly turnover rate decreased to 3.4% in August, the latest month available, from a revised 3.6% in July. The average delinquency rate stayed at 0.7%. HPA 2019-1 and HPA 2017-1 transactions reported a delinquency rate of 2.4% and 1.7%, respectively. Please note that any review of delinquency should be viewed within the context of the delinquency definitions in Table 8.

Chart 1 shows that the rent gains for securitized properties in September trailed rent gains for three- and four-bedroom properties; the RentRange rent change for three-bedroom properties was the highest at 7.1%, up from a revised 5.7% in August, and the RentRange rent change for four-bedroom properties was 6.2%, up from a revised 4.8% in August. The RentRange benchmarks track the year-over-year change on three- and four-bedroom median rents, weighted by MSA to match the geographic concentration of the DBRS Morningstar database.

Chart 2 shows the rental change of renewals versus vacant-to-occupied properties. For August, the latest month for which data is available, the rent change for renewal properties increased by 4.6%, up from 4.5% in July. Rent growth for vacant-to-occupied properties decreased by 3.1%. Chart 4 shows the MSA-level blended rent change. MSAs with rent changes above the 4.3% average are in blue, while those below are in red. The size of the circle indicates the percentage of properties by count from a given MSA in DBRS Morningstar's database. Table 4 exhibits the MSA-level blended rent change for the past 12 months.



Multiborrower Performance

In September, the number of loans decreased to 932. The number of loans 30-59 days delinquent increased to 28 from 21, the number of loans 60-89 days delinquent stayed at seven, and loans at least 90 days delinquent decreased to 26 from 27. Loans in foreclosure increased to eight, and loans in special servicing increased to 40 from 39.

Table 1 – Multiborrower Loan Performance by Percentage of Balance

	30-59 Delinquent	60-89 Delinquent	90+ Delinquent	Foreclosure	Real Estate Owned	Special Servicing
B2R 2015-1	2.82	0.00	0.02	0.02	0.00	0.76
FKL 2015-SFR1	0.00	0.00	0.00	0.00	0.00	0.00
CAF 2015-1	0.00	0.00	2.94	0.00	0.00	11.32
B2R 2015-2	0.86	0.00	2.10	0.86	0.00	2.34
CAF 2016-1	0.00	0.74	2.05	0.00	0.00	2.83
B2R 2016-1	1.80	0.46	2.50	0.78	0.00	2.77
CAF 2016-2	5.51	0.00	1.01	3.14	0.00	4.55
CAF 2017-1	4.33	0.00	1.01	0.00	0.38	5.74
CAF 2018-1	3.10	2.53	1.58	0.64	0.94	1.59
CAF 2018-2	2.78	0.32	0.84	0.00	0.00	0.84
CAF 2019-1	1.63	0.00	0.00	0.00	0.00	0.00

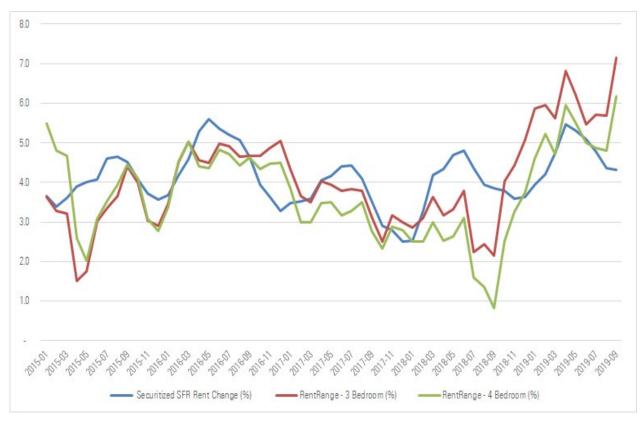
Table 2 - Multiborrower Loan Performance by Loan Count

	Total Loans	30-59 Delinguent	60-89 Delinguent	90+ Delinguent	Foreclosure	Real Estate Owned	Special Servicing
		- 1	- 1				
B2R 2015-1	91	3	0	1	1	0	5
FKL 2015-SFR1	2	0	0	0	0	0	0
CAF 2015-1	36	0	0	2	0	0	3
B2R 2015-2	165	3	0	7	3	0	8
CAF 2016-1	59	0	1	1	0	0	2
B2R 2016-1	145	5	2	7	1	0	8
CAF 2016-2	57	4	0	1	2	0	4
CAF 2017-1	74	2	0	2	0	1	5
CAF 2018-1	114	3	3	3	1	2	3
CAF 2018-2	115	6	1	2	0	0	2
CAF 2019-1	74	2	0	0	0	0	0
Overall	932	28	7	26	8	3	40



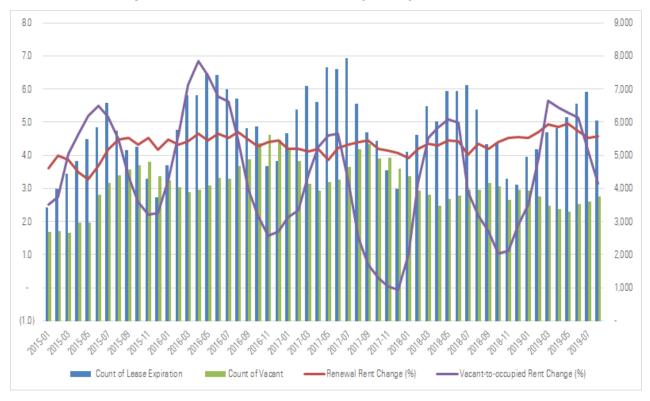
Single-Borrower Charts and Tables

Chart 1 - Single-Family Rental Rent Change Versus RentRange Year-Over-Year Rent Change



Sources: DBRS Morningstar and RentRange

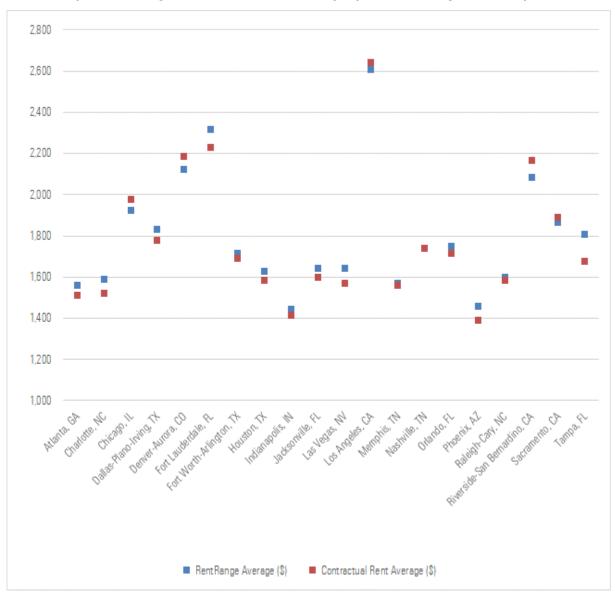
Chart 2 – Rental Changes for Renewals Versus Vacant-to-Occupied Properties



Source: DBRS Morningstar



Chart 3 - September Average Contractual Rent Versus Property-Level RentRange Estimate by MSA



Sources: DBRS Morningstar and RentRange

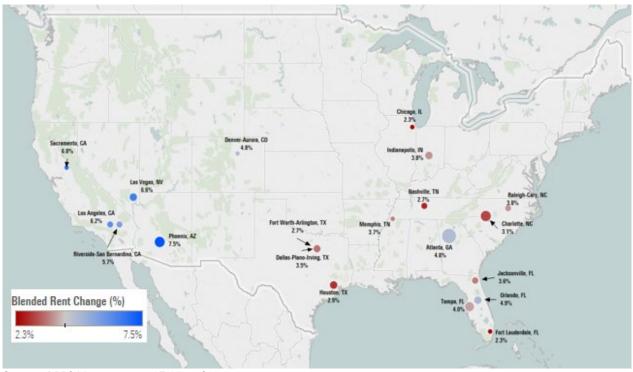
Table 3 – Difference between Average Contractual Rent and Property-Level RentRange Rent (by Percentage) - Top MSAs

		Year 2018		Ye	ar 2019								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Atlanta, GA		2.7	-0.3	0.2	1.3	2.0	1.6	1.6	-2.4	-3.3	-2.9	-2.2	-3.2
Charlotte, NC		2.3	-0.1	0.3	0.6	1.6	1.2	0.9	-2.8	-4.4	-4.0	-3.7	-4.0
Chicago, IL		10.1	11.3	10.7	13.7	11.2	11.3	12.0	4.3	2.5	2.7	3.0	2.9
Dallas-Plano-Irving, TX		0.8	0.3	0.2	0.0	0.4	0.5	0.8	-1.6	-2.7	-2.6	-2.3	-2.9
Denver-Aurora, CO	\	3.8	3.5	2.1	2.0	2.1	2.2	2.7	2.7	1.3	2.0	3.1	2.9
Fort Lauderdale, FL	<u></u>	0.4	-3.7	-3.3	-0.2	-0.2	0.0	0.2	-4.1	-4.9	-4.3	-4.0	-3.7
Fort Worth-Arlington, TX		1.7	1.0	1.2	0.9	1.5	1.3	1.5	-0.3	-1.5	-1.4	-1.3	-1.6
Houston, TX	\	-1.0	-1.7	-2.0	-3.7	-1.6	-1.6	-1.9	-2.2	-2.9	-2.8	-2.4	-2.8
Indianapolis, IN		2.7	2.3	1.0	1.7	2.2	2.3	2.6	-0.6	-2.1	-1.8	-1.9	-1.8
Jacksonville, FL		1.6	-1.0	-0.4	1.2	1.4	1.1	1.0	-2.3	-3.4	-2.7	-2.8	-2.9
Las Vegas, NV		-0.4	-0.8	0.1	-1.1	-0.4	-0.8	-0.3	-3.4	-4.6	-4.0	-3.8	-4.5
Los Angeles, CA	<u></u>	1.9	0.8	0.8	1.9	1.7	1.8	2.0	1.4	0.2	1.0	1.8	1.2
Memphis, TN	^	3.9	9.5	3.0	2.4	2.9	2.9	2.8	-0.2	-0.7	0.1	-0.5	-0.7
Nashville, TN	~~~	1.3	1.8	1.7	0.2	1.7	1.6	1.8	-0.6	-1.6	-1.4	-2.6	0.2
Orlando, FL		2.6	1.9	1.5	2.2	2.3	2.4	2.7	-0.7	-2.1	-1.5	-1.0	-1.9
Phoenix, AZ		-0.7	-1.5	-1.7	-1.4	-1.0	-1.2	-1.0	-3.3	-4.9	-4.5	-3.8	-4.7
Raleigh-Cary, NC		3.8	3.1	3.9	3.8	3.3	3.1	3.1	-0.1	-1.3	-1.1	-0.7	-1.0
Riverside-San Bernardino, CA		5.4	5.2	5.0	5.6	5.9	6.6	6.7	2.7	2.0	2.7	3.4	4.0
Sacramento, CA		5.4	4.1	3.9	4.9	6.6	7.5	7.6	-0.3	0.2	0.6	1.5	1.4
Tampa, FL		2.7	1.3	1.2	1.9	2.3	1.9	1.8	-6.3	-7.4	-7.1	-6.6	-7.1

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Chart 4 - MSA-Level Blended Rent Change*



Sources: DBRS Morningstar and Tableau Software

^{*}The size of the circles represents the total percentage (by count) of properties in each MSA, ranging from 1.42% to 14.61%. Because of their proximity, the Fort Worth-Arlington, Texas, MSA is hidden behind the Dallas-Plano-Irving, Texas, MSA.

Table 4 - Blended Rent Change (by Percentage) - Top MSAs



		Year 2018		Ye	ar 2019								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Atlanta, GA		4.4	4.5	4.6	4.1	4.1	4.7	6.0	6.3	6.3	5.1	5.2	4.8
Charlotte, NC		3.0	2.5	2.8	3.2	3.5	3.9	4.8	4.3	4.0	4.6	3.4	3.1
Chicago, IL		2.3	2.0	1.1	-1.8	0.7	2.7	3.1	3.3	3.5	3.6	2.3	2.3
Dallas-Plano-Irving, TX		3.5	1.8	2.0	2.5	3.2	3.7	4.2	4.1	3.2	3.1	2.9	3.5
Denver-Aurora, CO		2.4	2.2	2.8	3.6	3.8	4.3	6.9	5.6	4.9	5.1	4.5	4.8
Fort Lauderdale, FL		2.9	2.4	3.5	4.0	2.5	3.2	3.1	2.6	2.5	3.3	2.1	2.3
Fort Worth-Arlington, TX		2.2	2.4	2.7	3.3	3.8	4.7	4.5	4.2	4.8	4.1	3.3	2.7
Houston, TX	~~~	1.4	1.7	1.4	1.8	1.8	2.9	3.4	3.4	2.6	2.3	2.2	2.9
Indianapolis, IN		2.6	2.5	0.7	1.5	4.1	3.3	5.4	4.1	4.7	4.4	3.6	3.8
Jacksonville, FL		4.2	3.2	3.0	3.8	4.4	4.3	5.7	4.5	5.7	4.9	3.6	3.6
Las Vegas, NV		5.6	5.5	5.6	6.8	6.2	7.1	8.5	7.3	7.0	7.2	6.7	6.6
Los Angeles, CA		6.1	5.3	4.9	6.2	5.5	7.1	7.2	7.2	5.8	5.5	5.2	6.2
Memphis, TN		2.9	3.6	3.2	3.8	2.5	4.5	6.1	4.9	5.5	5.3	5.0	3.7
Nashville, TN	<u></u>	3.1	1.7	2.4	3.4	3.1	3.6	4.1	4.2	3.8	3.8	3.5	2.7
Orlando, FL		4.9	5.0	4.6	4.8	4.9	5.8	5.7	6.1	5.6	5.5	4.4	4.9
Phoenix, AZ		5.9	5.4	5.9	7.0	7.2	7.4	8.2	8.6	7.9	8.1	7.3	7.5
Raleigh-Cary, NC		2.3	2.4	3.4	3.6	3.1	3.1	4.3	4.3	4.0	3.7	4.1	3.8
Riverside-San Bernardino, CA		5.1	5.5	4.5	5.7	5.5	6.6	7.0	7.4	6.6	5.8	5.5	5.7
Sacramento, CA		7.3	6.0	6.2	7.7	10.0	7.6	8.4	9.2	6.5	7.0	7.0	6.8
Tampa, FL	~~~	3.0	3.1	4.0	3.3	3.5	4.1	4.7	4.1	4.5	4.2	3.9	4.0

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Table 5a – Month-End Vacancy (by Count)



	•	Year 2018		Y	ear 2019									Count
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
AH4R 2014-SFR2		185	172	184	197	184	158	138	145	198	192	185	192	4,544
AH4R 2014-SFR3		249	252	239	230	202	169	171	144	152	189	201	201	4,587
AH4R 2015-SFR1		240	236	236	228	221	172	176	140	167	160	183	204	4,696
AH4R 2015-SFR2		214	191	187	173	147	143	157	149	174	169	180	192	4,175
HPA 2017-1		93	94	92	95	88	75	69	56	59	69	81	98	1,289
HPA 2018-1		149	145	126	106	84	91	89	87	95	106	119	123	1,687
HPA 2019-1	/											8	17	1,185
IH 2017-SFR2		183	171	164	161	167	157	159	166	192	194	212	215	4,299
IH 2018-SFR1		188	187	192	196	192	207	198	200	226	255	281	265	4, 189
IH 2018-SFR2		233	269	241	233	219	228	237	200	255	261	246	244	5,365
IH 2018-SFR3		279	284	281	291	295	259	279	274	290	297	294	308	6,536
IH 2018-SFR4				253	271	290	260	272	280	328	330	340	459	5,300
PRD 2015-SFR3		158	132	141	134	118	104	109	129	161	150	149	164	3,144
PRD 2017-SFR1		121	130	131	129	117	105	93	101	96	107	124	131	2,707
PRD 2018-SFR1		123	132	115	85	53	42	50	56	67	62	82	105	2,111
PRD 2018-SFR2		50	56	99	116	110	87	82	97	86	62	60	70	2,116
PRD 2019-SFR2									106	102	113	119	126	2,459
PRD 2019-SFR3												92	95	2,268
SWH 2017-1		206	179	171	195	243	219	248	240	252	263	258	332	4,327
TAH 2016-SFR1		181	163	180	156	146	151	164	174	142	142	155	194	3,399
TAH 2017-SFR1		96	110	160	162	149	129	107	110	71	96	86	140	3,475
TAH 2017-SFR2		110	98	114	87	90	83	68	106	80	86	95	119	2,619
TAH 2018-SFR1		98	99	109	125	88	77	83	86	66	68	92	128	2,509
Overall SFR		3,156	3,100	3,415	3,370	3,203	2,916	2,949	3,046	3,259	3,371	3,642	4,122	78,986

Table 5b — Month-End Vacancy (by Percentage)



		Year 2018		1	Year 2019								
		00	t Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
AH4R 2014-SFR2		4.	3.8	4.0	4.3	4.0	3.5	3.0	3.2	4.4	4.2	4.1	4.2
AH4R 2014-SFR3		5.5	5.5	5.2	5.0	4.4	3.7	3.7	3.1	3.3	4.1	4.4	4.4
AH4R 2015-SFR1		5.2	2 5.0	5.0	4.9	4.7	3.7	3.7	3.0	3.6	3.4	3.9	4.3
AH4R 2015-SFR2		5.2	2 4.6	4.5	4.1	3.5	3.4	3.8	3.6	4.2	4.0	4.3	4.6
HPA 2017-1		7.0	7.1	6.9	7.2	6.6	5.7	5.3	4.3	4.5	5.3	6.3	7.6
HPA 2018-1		8.9	5 8.2	7.2	6.0	4.8	5.2	5.1	5.0	5.5	6.2	7.0	7.3
HPA 2019-1	/											0.7	1.4
IH 2017-SFR2		4.3	2 3.9	3.8	3.7	3.8	3.6	3.7	3.8	4.4	4.5	4.9	5.0
IH 2018-SFR1		4.4	4.4	4.5	4.6	4.5	4.9	4.7	4.7	5.4	6.1	6.7	6.3
IH 2018-SFR2		4.3	2 4.9	4.4	4.3	4.0	4.2	4.4	3.7	4.7	4.8	4.6	4.5
IH 2018-SFR3		4.7	2 4.3	4.2	4.4	4.5	3.9	4.2	4.2	4.4	4.5	4.5	4.7
IH 2018-SFR4				4.7	5.0	5.4	4.8	5.1	5.2	6.1	6.2	6.4	8.7
PRD 2015-SFR3		5.0	4.2	4.5	4.3	3.7	3.3	3.5	4.1	5.1	4.8	4.7	5.2
PRD 2017-SFR1		4.5	5 4.8	4.8	4.8	4.3	3.9	3.4	3.7	3.5	4.0	4.6	4.8
PRD 2018-SFR1		5.8	6.2	5.4	4.0	2.5	2.0	2.4	2.7	3.2	2.9	3.9	5.0
PRD 2018-SFR2		2.4	2.6	4.7	5.5	5.2	4.1	3.9	4.6	4.1	2.9	2.8	3.3
PRD 2019-SFR2									4.3	4.1	4.6	4.8	5.1
PRD 2019-SFR3	_											4.1	4.2
SWH 2017-1		4.7	7 4.1	3.9	4.4	5.5	5.0	5.7	5.5	5.8	6.1	6.0	7.7
TAH 2016-SFR1		5.3	3 4.7	5.2	4.5	4.3	4.4	4.8	5.1	4.2	4.2	4.6	5.7
TAH 2017-SFR1		2.8	3.2	4.6	4.7	4.3	3.7	3.1	3.2	2.0	2.8	2.5	4.0
TAH 2017-SFR2		4.3	3.7	4.4	3.3	3.4	3.2	2.6	4.0	3.1	3.3	3.6	4.5
TAH 2018-SFR1		3.9	3.9	4.3	5.0	3.5	3.1	3.3	3.4	2.6	2.7	3.7	5.1
Overall SFR		4.6	3 4.5	4.6	4.6	4.3	4.0	4.0	4.0	4.3	4.5	4.6	5.2

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Table 5c - Month-End Vacancy (by Percentage) - Top MSAs



	Year 2018 Year 2019												
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Atlanta, GA		5.0	4.8	4.7	4.8	4.7	4.4	4.1	4.4	4.4	4.1	4.2	5.1
Charlotte, NC		5.1	4.2	4.5	4.3	4.3	4.2	4.7	4.7	4.1	4.5	4.8	5.8
Chicago, IL		6.0	5.7	5.6	4.1	3.7	3.0	2.4	2.3	3.5	4.2	4.3	5.9
Dallas-Plano-Irving, TX		5.6	5.8	5.5	5.3	4.9	4.7	4.6	4.7	5.4	5.2	5.7	6.2
Denver-Aurora, CO		6.5	6.0	5.7	5.8	5.8	5.6	5.2	5.5	7.6	8.1	8.7	9.8
Fort Lauderdale, FL		4.5	3.9	4.9	6.1	5.2	5.8	6.5	7.2	6.4	7.0	6.4	7.1
Fort Worth-Arlington, TX		5.1	4.9	4.6	4.0	3.5	4.1	4.5	4.2	4.1	4.7	5.3	5.8
Houston, TX		6.6	6.8	6.5	6.4	5.8	5.2	5.4	4.2	4.7	4.9	4.8	6.2
Indianapolis, IN		5.4	6.0	5.8	5.0	5.1	3.8	3.3	3.4	3.5	3.4	4.0	4.3
Jacksonville, FL		4.7	4.7	4.5	4.4	4.5	3.7	4.3	3.9	4.5	4.5	3.7	4.0
Las Vegas, NV		3.5	3.2	2.8	3.4	3.5	3.1	2.6	3.0	3.3	4.0	4.5	5.2
Los Angeles, CA		4.9	4.7	4.5	4.0	4.2	4.4	4.1	4.7	5.1	5.5	4.9	5.7
Memphis, TN		5.4	4.9	4.9	5.8	4.6	3.7	3.4	3.7	4.7	3.7	3.9	3.9
Nashville, TN		5.4	4.6	4.5	5.0	4.2	4.1	4.1	4.7	4.4	4.3	4.3	4.4
Orlando, FL		3.4	3.9	4.1	4.4	4.5	4.3	3.4	3.6	3.8	4.0	5.1	5.4
Phoenix, AZ		2.7	2.9	3.1	2.9	2.8	2.7	2.7	2.8	3.3	3.4	3.8	4.3
Raleigh-Cary, NC		5.1	4.8	4.7	4.5	3.6	3.1	4.5	4.7	4.6	4.6	5.1	5.1
Riverside-San Bernardino, CA		4.3	3.8	2.8	3.9	4.5	4.6	4.9	5.2	4.9	4.6	5.2	5.5
Sacramento, CA	~~	4.0	2.9	3.2	3.7	3.3	2.9	3.0	2.8	4.3	4.5	3.6	3.8
Tampa, FL		4.9	4.3	4.6	4.7	4.3	3.9	3.8	4.3	4.3	4.1	4.4	5.1

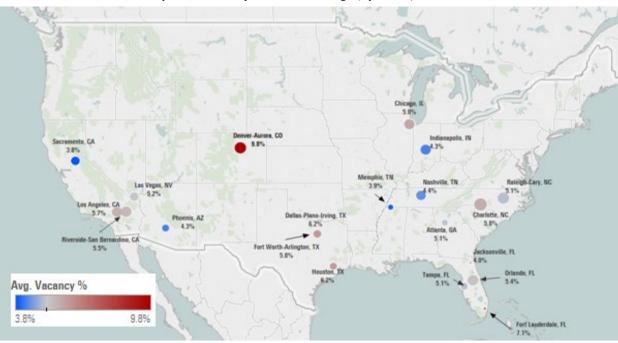


Chart 5 – MSA-Level Vacancy and Lease Expiration Percentage (by Count)*

Sources: DBRS Morningstar and Tableau Software

^{*}The size of the circles represents the past three months of lease expirations by count as a percentage of each MSA, ranging from 19.505% to 25.279%. Because of their proximity, the Fort Worth-Arlington, Texas, MSA is hidden behind the Dallas-Plano-Irving, Texas, MSA.

Table 6a – Lease Expiration (by Count)



					2010									lotal
		Year 2018 Oct	Nov	Dec Y	J an	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Count
AH4R 2014-SFR2		215	200	172	245	306	345	405	491	459	445	415	257	4,544
AH4R 2014-SFR3		240	198	161	263	275	297	381	419	454	536	441	267	4,587
AH4R 2015-SFR1		276	252	231	341	359	391	298	352	406	425	416	292	4,696
AH4R 2015-SFR2		155	173	153	198	250	296	349	455	504	463	380	194	4, 175
HPA 2017-1	~~~	144	139	99	101	78	94	96	76	47	73	88	86	1,289
HPA 2018-1		122	73	71	69	71	105	113	133	171	186	145	126	1,687
HPA 2019-1												0	1	1,185
IH 2017-SFR2		243	197	183	218	256	275	273	302	372	377	338	252	4, 299
IH 2018-SFR1		324	251	206	260	285	293	292	357	355	396	324	350	4, 189
IH 2018-SFR2		346	306	276	320	353	395	338	335	342	384	355	292	5,365
IH 2018-SFR3		416	401	324	428	410	452	441	387	416	458	467	341	6,536
IH 2018-SFR4				250	292	363	345	379	457	514	526	430	368	5,300
PRD 2015-SFR3		223	140	149	126	142	139	203	214	282	359	259	239	3,144
PRD 2017-SFR1		310	232	231	179	152	146	147	122	154	215	158	175	2,707
PRD 2018-SFR1		423	379	85	21	29	56	81	67	88	165	170	202	2,111
PRD 2018-SFR2		7	8	279	345	258	160	181	220	202	78	38	41	2,116
PRD 2019-SFR2									147	202	259	243	219	2,459
PRD 2019-SFR3	/											98	151	2,268
SWH 2017-1		217	195	164	285	307	336	418	459	390	398	338	240	4,327
TAH 2016-SFR1		203	135	137	122	154	174	245	215	208	255	228	206	3,399
TAH 2017-SFR1		244	168	162	225	229	263	192	191	195	205	243	228	3,475
TAH 2017-SFR2		156	111	113	155	153	182	135	174	170	170	201	147	2,619
TAH 2018-SFR1		172	112	119	151	125	156	135	137	148	144	188	181	2,509
Overall SFR		4,436	3,670	3,565	4,344	4,555	4,900	5, 102	5,710	6,079	6,517	5,963	4,855	78,986

Total

Table 6b – Lease Expiration (by Percentage)



Year 2018 Year 2019													
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
AH4R 2014-SFR2		4.8	4.4	3.8	5.4	6.7	7.6	8.9	10.8	10.1	9.8	9.1	5.7
AH4R 2014-SFR3		5.3	4.3	3.5	5.7	6.0	6.5	8.3	9.1	9.9	11.7	9.6	5.8
AH4R 2015-SFR1		6.0	5.4	4.9	7.3	7.6	8.3	6.3	7.5	8.6	9.0	8.9	6.2
AH4R 2015-SFR2		3.8	4.1	3.7	4.7	6.0	7.1	8.4	10.9	12.1	11.1	9.1	4.6
HPA 2017-1		10.8	10.4	7.4	7.6	5.9	7.1	7.3	5.8	3.6	5.6	6.8	6.7
HPA 2018-1		6.9	4.1	4.0	3.9	4.0	6.0	6.5	7.7	9.9	10.9	8.5	7.5
HPA 2019-1	/											0.0	0.1
IH 2017-SFR2		5.6	4.5	4.2	5.0	5.9	6.3	6.3	7.0	8.6	8.7	7.9	5.9
IH 2018-SFR1		7.6	5.9	4.8	6.1	6.7	6.9	6.9	8.4	8.4	9.4	7.7	8.4
IH 2018-SFR2		6.3	5.6	5.0	5.9	6.5	7.3	6.2	6.2	6.3	7.1	6.6	5.4
IH 2018-SFR3	~~~	6.3	6.0	4.9	6.5	6.2	6.8	6.7	5.9	6.3	7.0	7.1	5.2
IH 2018-SFR4				4.6	5.4	6.7	6.4	7.1	8.5	9.6	9.9	8.1	6.9
PRD 2015-SFR3		7.1	4.4	4.7	4.0	4.5	4.4	6.4	6.8	9.0	11.4	8.2	7.6
PRD 2017-SFR1		11.4	8.6	8.5	6.6	5.6	5.4	5.4	4.5	5.7	7.9	5.8	6.5
PRD 2018-SFR1		20.0	17.9	4.0	1.0	1.4	2.7	3.8	3.2	4.2	7.8	8.1	9.6
PRD 2018-SFR2	$\overline{}$	0.3	0.4	13.2	16.3	12.2	7.6	8.6	10.4	9.5	3.7	1.8	1.9
PRD 2019-SFR2									6.0	8.2	10.5	9.9	8.9
PRD 2019-SFR3												4.3	6.7
SWH 2017-1		4.9	4.4	3.7	6.5	7.0	7.7	9.5	10.5	8.9	9.2	7.8	5.5
TAH 2016-SFR1		5.9	3.9	4.0	3.6	4.5	5.1	7.2	6.3	6.1	7.5	6.7	6.1
TAH 2017-SFR1		7.0	4.8	4.7	6.5	6.6	7.6	5.5	5.5	5.6	5.9	7.0	6.6
TAH 2017-SFR2		6.0	4.2	4.3	5.9	5.8	6.9	5.2	6.6	6.5	6.5	7.7	5.6
TAH 2018-SFR1		6.9	4.5	4.7	6.0	5.0	6.2	5.4	5.5	5.9	5.7	7.5	7.2
Overall SFR		6.5	5.4	4.8	5.9	6.2	6.7	6.9	7.5	8.0	8.6	7.5	6.1

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Table 6c – Lease Expiration (by Percentage) – Top MSAs



		Year 2018		<u>Y</u>	ear 2019								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Atlanta, GA		6.4	5.0	4.8	5.5	5.8	6.4	7.4	6.9	7.7	7.3	6.9	6.6
Charlotte, NC		6.2	4.7	4.0	5.2	5.2	6.2	7.5	7.8	8.5	10.0	8.8	6.4
Chicago, IL		3.7	3.1	3.9	5.3	5.5	7.5	10.1	11.1	10.6	8.6	7.9	7.0
Dallas-Plano-Irving, TX		6.8	5.4	5.0	5.3	6.8	6.3	7.0	7.3	8.3	8.5	7.0	6.1
Denver-Aurora, CO		6.3	4.8	4.5	7.9	5.6	5.7	5.8	7.9	11.9	11.0	8.8	4.6
Fort Lauderdale, FL	~~~	6.5	5.1	5.5	8.0	5.8	6.1	8.1	6.0	6.4	7.0	7.0	5.7
Fort Worth-Arlington, TX		5.8	5.3	5.5	5.6	5.8	7.3	7.2	8.1	7.6	8.5	7.2	6.1
Houston, TX	~~~	5.7	5.8	5.0	5.4	6.7	6.9	7.0	6.0	6.4	8.4	6.0	6.9
Indianapolis, IN		6.3	4.6	3.9	5.6	5.5	6.5	8.5	10.1	8.2	9.4	7.4	6.6
Jacksonville, FL		6.6	6.0	5.3	5.8	5.7	6.4	6.9	8.5	8.3	8.2	6.3	5.0
Las Vegas, NV		7.9	5.0	5.0	5.8	8.8	7.0	6.1	6.6	7.6	7.4	8.5	6.2
Los Angeles, CA		6.2	5.0	3.5	4.6	5.2	6.8	5.4	9.6	8.4	8.7	7.7	7.0
Memphis, TN		6.3	6.3	6.6	7.0	5.3	5.1	8.2	6.7	7.6	7.3	5.4	7.9
Nashville, TN		6.5	4.1	5.2	6.1	5.6	6.0	8.0	8.5	9.8	10.5	7.1	5.3
Orlando, FL		6.6	5.6	4.9	5.9	5.6	6.0	6.4	7.6	8.5	9.4	8.4	6.2
Phoenix, AZ		6.2	5.9	5.5	6.6	7.2	7.1	7.4	7.2	7.4	7.9	7.5	6.2
Raleigh-Cary, NC	~	6.6	7.3	5.1	4.9	5.5	5.4	8.0	9.0	10.0	10.1	8.1	6.1
Riverside-San Bernardino, CA	~~~	6.5	6.1	3.9	6.4	5.3	6.5	7.8	8.5	7.1	9.3	7.1	7.3
Sacramento, CA	~~	5.0	4.7	3.4	5.0	6.6	7.1	6.3	7.0	7.8	8.5	8.3	5.5
Tampa, FL		7.4	5.5	5.2	6.0	5.7	6.6	6.4	6.5	8.2	8.1	7.7	5.5

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Table 7a — Historical Total Months of Vacancy for September Vacancies (by Count)

		1	2	3	4	5	6	7	8	9	10	11	12+	Total
AH4R 2014-SFR2		23	39	45	30	20	21	5	3	1	2	1	2	192
AH4R 2014-SFR3		21	40	42	29	23	17	12	5	5	3	2	2	201
AH4R 2015-SFR1		32	42	43	26	28	13	13	1	0	1	3	2	204
AH4R 2015-SFR2		36	47	30	23	23	17	6	3	3	0	1	3	192
HPA 2017-1		26	22	22	12	8	1	3	3	0	1	0	0	98
HPA 2018-1		32	40	25	12	7	1	4	1	0	0	0	1	123
HPA 2019-1		12	3	2										17
IH 2017-SFR2		58	81	26	28	11	3	1	2	1	2	0	2	215
IH 2018-SFR1	Ши	67	72	39	40	17	7	7	4	4	3	3	2	265
IH 2018-SFR2	Ш	80	76	43	26	5	2	8	2	1	0	0	1	244
IH 2018-SFR3	Ju	117	89	42	18	12	13	5	4	3	1	2	2	308
IH 2018-SFR4	ш	110	163	109	31	22	5	7	5	0	5	2		459
PRD 2015-SFR3		32	31	33	23	19	10	5	1	4	3	0	3	164
PRD 2017-SFR1		33	43	28	12	10	4	0	0	0	0	0	1	131
PRD 2018-SFR1		46	40	12	5	0	2	0	0	0	0	0	0	105
PRD 2018-SFR2		27	28	9	5	1	0	0	0	0	0	0	0	70
PRD 2019-SFR2	1	66	37	12	7	3	1							126
PRD 2019-SFR3	L	75	9	11										95
SWH 2017-1	Ши	51	73	76	57	34	16	9	9	3	1	1	2	332
TAH 2016-SFR1		32	39	41	35	11	16	9	4	5	0	1	1	194
TAH 2017-SFR1		52	43	20	11	10	2	2	0	0	0	0	0	140
TAH 2017-SFR2		37	35	21	8	11	1	0	2	2	0	0	2	119
TAH 2018-SFR1	L	45	32	23	17	5	1	1	1	0	0	1	2	128
Overall SFR	Шии	1,110	1,124	754	455	280	153	97	50	32	22	17	28	4,122

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Table 7b – Historical Total Months of Vacancy for September Vacancies (by Percentage)

F

		1	2	3	4	5	6	7	8	9	10	11	12+	Total
AH4R 2014-SFR2		12.0	20.3	23.4	15.6	10.4	10.9	2.6	1.6	0.5	1.0	0.5	1.0	100.0
AH4R 2014-SFR3	.11	10.4	19.9	20.9	14.4	11.4	8.5	6.0	2.5	2.5	1.5	1.0	1.0	100.0
AH4R 2015-SFR1		15.7	20.6	21.1	12.7	13.7	6.4	6.4	0.5	0.0	0.5	1.5	1.0	100.0
AH4R 2015-SFR2		18.8	24.5	15.6	12.0	12.0	8.9	3.1	1.6	1.6	0.0	0.5	1.6	100.0
HPA 2017-1		26.5	22.4	22.4	12.2	8.2	1.0	3.1	3.1	0.0	1.0	0.0	0.0	100.0
HPA 2018-1	Ш	26.0	32.5	20.3	9.8	5.7	0.8	3.3	0.8	0.0	0.0	0.0	0.8	100.0
HPA 2019-1	L.	70.6	17.6	11.8										100.0
IH 2017-SFR2	ш	27.0	37.7	12.1	13.0	5.1	1.4	0.5	0.9	0.5	0.9	0.0	0.9	100.0
IH 2018-SFR1		25.3	27.2	14.7	15.1	6.4	2.6	2.6	1.5	1.5	1.1	1.1	0.8	100.0
IH 2018-SFR2	ш	32.8	31.1	17.6	10.7	2.0	0.8	3.3	0.8	0.4	0.0	0.0	0.4	100.0
IH 2018-SFR3	II	38.0	28.9	13.6	5.8	3.9	4.2	1.6	1.3	1.0	0.3	0.6	0.6	100.0
IH 2018-SFR4	th	24.0	35.5	23.7	6.8	4.8	1.1	1.5	1.1	0.0	1.1	0.4		100.0
PRD 2015-SFR3		19.5	18.9	20.1	14.0	11.6	6.1	3.0	0.6	2.4	1.8	0.0	1.8	100.0
PRD 2017-SFR1	ılı	25.2	32.8	21.4	9.2	7.6	3.1	0.0	0.0	0.0	0.0	0.0	0.8	100.0
PRD 2018-SFR1	ш	43.8	38.1	11.4	4.8	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	100.0
PRD 2018-SFR2	П	38.6	40.0	12.9	7.1	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
PRD 2019-SFR2	h	52.4	29.4	9.5	5.6	2.4	0.8							100.0
PRD 2019-SFR3	l	78.9	9.5	11.6										100.0
SWH 2017-1		15.4	22.0	22.9	17.2	10.2	4.8	2.7	2.7	0.9	0.3	0.3	0.6	100.0
TAH 2016-SFR1		16.5	20.1	21.1	18.0	5.7	8.2	4.6	2.1	2.6	0.0	0.5	0.5	100.0
TAH 2017-SFR1	II	37.1	30.7	14.3	7.9	7.1	1.4	1.4	0.0	0.0	0.0	0.0	0.0	100.0
TAH 2017-SFR2		31.1	29.4	17.6	6.7	9.2	0.8	0.0	1.7	1.7	0.0	0.0	1.7	100.0
TAH 2018-SFR1		35.2	25.0	18.0	13.3	3.9	0.8	0.8	0.8	0.0	0.0	0.8	1.6	100.0
Overall SFR	Ш	26.9	27.3	18.3	11.0	6.8	3.7	2.4	1.2	0.8	0.5	0.4	0.7	100.0

Table 7c – Consecutive Months of Vacancy for September Vacancies (by Count)

		1	2	3	4	5	6	7	8	9	10	11	12+	Total
AH4R 2014-SFR2	ш	91	68	26	5	1	0	0	0	0	0	0	1	192
AH4R 2014-SFR3	h	101	62	29	7	1	0	0	0	0	0	0	1	201
AH4R 2015-SFR1	ш	99	78	23	4	0	0	0	0	0	0	0	0	204
AH4R 2015-SFR2	h	102	56	23	6	2	0	1	0	0	0	0	2	192
HPA 2017-1		42	29	15	6	3	2	1	0	0	0			98
HPA 2018-1		41	45	19	10	4	1	2	0	0	0	0	1	123
HPA 2019-1		12	5											17
IH 2017-SFR2	ш	99	72	21	9	4	2	1	2	1	2	0	2	215
IH 2018-SFR1	ш	93	89	26	21	14	7	3	3	2	2	3	2	265
IH 2018-SFR2	lu	107	76	34	10	5	3	6	1	1	0	0	1	244
IH 2018-SFR3	lı	136	86	36	11	11	11	5	4	3	2	1	2	308
IH 2018-SFR4	Ш	141	148	100	29	19	3	7	5	1	6			459
PRD 2015-SFR3	l	85	45	23	6	3	1	1	0	0	0	0	0	164
PRD 2017-SFR1		63	51	10	2	3	1	0	0	0	0	0	1	131
PRD 2018-SFR1	L.	69	30	6	0	0	0							105
PRD 2018-SFR2		38	21	6	4	1								70
PRD 2019-SFR2	L	67	38	10	7	4								126
PRD 2019-SFR3	L	75	0	9	3	4	0	1	0	0	1	0	2	95
SWH 2017-1	ш	85	116	61	29	17	8	6	6	2	0	0	2	332
TAH 2016-SFR1	ш	79	65	31	4	5	4	4	1	1	0	0	0	194
TAH 2017-SFR1	L	85	37	13	3	2	0	0						140
TAH 2017-SFR2		52	38	15	2	8	0	0	1	1	0	0	2	119
TAH 2018-SFR1		64	38	13	5	4	0	1	0	0	0	1	2	128
Overall SFR	<u> </u>	1,826	1,293	549	183	115	43	39	23	12	13	5	21	4,122

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Table 7d – Consecutive Months of Vacancy for September Vacancies (by Percentage)

		1	2	3	4	5	6	7	8	9	10	11	12+	Total
AH4R 2014-SFR2	li	47.4	35.4	13.5	2.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	100.0
AH4R 2014-SFR3	lı	50.2	30.8	14.4	3.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	100.0
AH4R 2015-SFR1	ш	48.5	38.2	11.3	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
AH4R 2015-SFR2	li	53.1	29.2	12.0	3.1	1.0	0.0	0.5	0.0	0.0	0.0	0.0	1.0	100.0
HPA 2017-1	li	42.9	29.6	15.3	6.1	3.1	2.0	1.0	0.0	0.0	0.0			100.0
HPA 2018-1	Ш	33.3	36.6	15.4	8.1	3.3	0.8	1.6	0.0	0.0	0.0	0.0	0.8	100.0
HPA 2019-1	h	70.6	29.4											100.0
IH 2017-SFR2	h	46.0	33.5	9.8	4.2	1.9	0.9	0.5	0.9	0.5	0.9	0.0	0.9	100.0
IH 2018-SFR1	ш	35.1	33.6	9.8	7.9	5.3	2.6	1.1	1.1	0.8	0.8	1.1	0.8	100.0
IH 2018-SFR2	h	43.9	31.1	13.9	4.1	2.0	1.2	2.5	0.4	0.4	0.0	0.0	0.4	100.0
IH 2018-SFR3	h	44.2	27.9	11.7	3.6	3.6	3.6	1.6	1.3	1.0	0.6	0.3	0.6	100.0
IH 2018-SFR4	Ш	30.7	32.2	21.8	6.3	4.1	0.7	1.5	1.1	0.2	1.3			100.0
PRD 2015-SFR3	h	51.8	27.4	14.0	3.7	1.8	0.6	0.6	0.0	0.0	0.0	0.0	0.0	100.0
PRD 2017-SFR1	l1	48.1	38.9	7.6	1.5	2.3	0.8	0.0	0.0	0.0	0.0	0.0	0.8	100.0
PRD 2018-SFR1	h.	65.7	28.6	5.7	0.0	0.0	0.0							100.0
PRD 2018-SFR2	h	54.3	30.0	8.6	5.7	1.4								100.0
PRD 2019-SFR2	h	53.2	30.2	7.9	5.6	3.2								100.0
PRD 2019-SFR3	L	78.9		9.5	3.2	4.2	0.0	1.1	0.0	0.0	1.1	0.0	2.1	100.0
SWH 2017-1	l	25.6	34.9	18.4	8.7	5.1	2.4	1.8	1.8	0.6	0.0	0.0	0.6	100.0
TAH 2016-SFR1	ш	40.7	33.5	16.0	2.1	2.6	2.1	2.1	0.5	0.5	0.0	0.0	0.0	100.0
TAH 2017-SFR1	h	60.7	26.4	9.3	2.1	1.4	0.0	0.0						100.0
TAH 2017-SFR2	h	43.7	31.9	12.6	1.7	6.7	0.0	0.0	0.8	0.8	0.0	0.0	1.7	100.0
TAH 2018-SFR1		50.0	29.7	10.2	3.9	3.1	0.0	0.8	0.0	0.0	0.0	0.8	1.6	100.0
Overall SFR	ш	26.9	27.3	18.3	11.0	6.8	3.7	2.4	1.2	0.8	0.5	0.4	0.7	100.0

Table 8 – Delinquency Definition



Issuer	Definition
American Homes 4 Rent	Past due one calendar month or more (not dependent on day count) and owing \$200 or more
Invitation Homes/Starwood Waypoint Homes	Past due 30 days or more (not dependent on calendar month) and owing 25% of one month's rent or more
Home Partners of America	Past due 30 days or more (not dependent on calendar month) and owing \$500 or more
Progress Residential	Past due 30 days or more (not dependent on calendar month) and owing \$200 or more ¹
Tricon American Homes	Past due 30 days or more (not dependent on calendar month) and owing \$500 or more ²

¹Includes Section 8 rent, pet fees, and MTM fees, but excludes late fees and damage fees.

² Based on total receivables.

Table 9a – Month-End Delinquency (by Count)



															Total
		<u>Year 2018</u>	Oct	Nov	Dec Ye	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Count
AH4R 2014-SFR2			16	21	22	18	17	18	8	17	26	21	19	10	4,544
AH4R 2014-SFR3			13	7	15	13	8	9	8	11	15	19	16	20	4,587
AH4R 2015-SFR1			14	17	26	21	25	16	13	13	21	22	23	26	4,696
AH4R 2015-SFR2			11	13	12	15	23	15	8	9	18	25	26	37	4, 175
HPA 2017-1			22	21	20	20	14	11	12	11	16	19	18	22	1,289
HPA 2018-1	\		28	17	24	23	22	10	19	19	18	21	28	24	1,687
HPA 2019-1	/												19	29	1,185
IH 2017-SFR2	<u></u>		30	40	65	52	23	31	40	42	30	31	37	44	4,299
IH 2018-SFR1	^		20	41	65	22	28	22	17	21	26	31	26	18	4,189
IH 2018-SFR2	^		53	48	92	58	61	44	37	48	45	41	41	32	5,365
IH 2018-SFR3			67	87	134	70	48	73	59	65	62	66	69	57	6,536
IH 2018-SFR4					65	42	38	33	28	28	39	33	36	25	5,300
PRD 2015-SFR3	~~		25	25	19	16	36	27	21	22	18	20	23	29	3,144
PRD 2017-SFR1	~~~		17	22	18	23	19	11	16	12	14	17	19	27	2,707
PRD 2018-SFR1			9	7	4	10	13	15	10	16	14	19	14	0	2,111
PRD 2018-SFR2			17	15	7	10	14	10	12	9	16	23	29	35	2,116
PRD 2019-SFR2										12	19	16	20	24	2,459
PRD 2019-SFR3	/												26	29	2,268
SWH 2017-1	$\overline{}$		34	29	87	29	20	20	14	19	19	15	20	7	4,327
TAH 2016-SFR1			6	7	1	18	1	3	7	14	2	9	13	10	3,399
TAH 2017-SFR1	\ \\\		8	9	0	9	1	2	6	14	0	7	2	7	3,475
TAH 2017-SFR2	~~		2	5	2	11	1	3	6	9	0	4	5	12	2,619
TAH 2018-SFR1	\\\\\\		1	7	0	8	0	6	4	7	1	3	3	9	2,509
Overall SFR		3	93	438	678	488	412	379	345	418	419	462	532	533	78,986

Table 9b – Month-End Delinquency (by Percentage)



		Year 2018		<u>ү</u>	ear 2019								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
AH4R 2014-SFR2		0.4	0.5	0.5	0.4	0.4	0.4	0.2	0.4	0.6	0.5	0.4	0.2
AH4R 2014-SFR3	~~~	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.4
AH4R 2015-SFR1		0.3	0.4	0.6	0.4	0.5	0.3	0.3	0.3	0.4	0.5	0.5	0.6
AH4R 2015-SFR2		0.3	0.3	0.3	0.4	0.6	0.4	0.2	0.2	0.4	0.6	0.6	0.9
HPA 2017-1		1.6	1.6	1.5	1.5	1.1	0.8	0.9	0.8	1.2	1.5	1.4	1.7
HPA 2018-1		1.6	1.0	1.4	1.3	1.3	0.6	1.1	1.1	1.0	1.2	1.6	1.4
HPA 2019-1												1.6	2.4
IH 2017-SFR2	^~	0.7	0.9	1.5	1.2	0.5	0.7	0.9	1.0	0.7	0.7	0.9	1.0
IH 2018-SFR1		0.5	1.0	1.5	0.5	0.7	0.5	0.4	0.5	0.6	0.7	0.6	0.4
IH 2018-SFR2	^	1.0	0.9	1.7	1.1	1.1	0.8	0.7	0.9	0.8	0.8	0.8	0.6
IH 2018-SFR3		1.0	1.3	2.0	1.1	0.7	1.1	0.9	1.0	0.9	1.0	1.1	0.9
IH 2018-SFR4				1.2	0.8	0.7	0.6	0.5	0.5	0.7	0.6	0.7	0.5
PRD 2015-SFR3		0.8	0.8	0.6	0.5	1.1	0.9	0.7	0.7	0.6	0.6	0.7	0.9
PRD 2017-SFR1		0.6	0.8	0.7	0.8	0.7	0.4	0.6	0.4	0.5	0.6	0.7	1.0
PRD 2018-SFR1		0.4	0.3	0.2	0.5	0.6	0.7	0.5	0.8	0.7	0.9	0.7	0.0
PRD 2018-SFR2		0.8	0.7	0.3	0.5	0.7	0.5	0.6	0.4	0.8	1.1	1.4	1.7
PRD 2019-SFR2	~								0.5	0.8	0.7	0.8	1.0
PRD 2019-SFR3	/											1.1	1.3
SWH 2017-1		0.8	0.7	2.0	0.7	0.5	0.5	0.3	0.4	0.4	0.3	0.5	0.2
TAH 2016-SFR1	~~~	0.2	0.2	0.0	0.5	0.0	0.1	0.2	0.4	0.1	0.3	0.4	0.3
TAH 2017-SFR1	\ \\	0.2	0.3	0.0	0.3	0.0	0.1	0.2	0.4	0.0	0.2	0.1	0.2
TAH 2017-SFR2	\sim	0.1	0.2	0.1	0.4	0.0	0.1	0.2	0.3	0.0	0.2	0.2	0.5
TAH 2018-SFR1	\\\\\	0.0	0.3	0.0	0.3	0.0	0.2	0.2	0.3	0.0	0.1	0.1	0.4
Overall SFR	^	0.6	0.6	0.9	0.7	0.6	0.5	0.5	0.6	0.6	0.6	0.7	0.7

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Table 10 - Monthly Retention Rate of Expiring Leases (by Percentage)

		Year 2018		Ye	ear 2019								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
AH4R 2014-SFR2	~~~	74.9	79.0	69.8	82.9	78.4	83.5	82.2	74.7	73.9	75.7	76.6	TBD
AH4R 2014-SFR3		72.1	71.7	78.3	78.7	79.3	76.4	77.7	76.8	76.2	74.1	76.6	TBD
AH4R 2015-SFR1		71.0	81.3	79.7	78.0	79.4	79.8	78.5	75.0	70.0	73.2	78.6	TBD
AH4R 2015-SFR2		79.4	76.3	68.0	80.8	78.8	74.0	76.8	75.4	75.6	72.8	77.6	TBD
HPA 2017-1	~~~	84.7	79.1	83.8	84.2	82.1	76.6	76.0	75.0	80.9	71.2	73.9	TBD
HPA 2018-1		82.0	79.5	85.9	79.7	77.5	80.0	78.8	75.9	73.1	74.7	71.0	TBD
HPA 2019-1													TBD
IH 2017-SFR2		76.5	81.7	88.5	81.2	80.9	86.5	78.8	76.8	79.0	80.9	76.9	TBD
IH 2018-SFR1		84.6	78.9	81.6	84.2	78.6	80.5	83.9	82.9	80.0	84.8	72.8	TBD
IH 2018-SFR2		80.1	77.5	83.7	80.6	78.2	75.9	78.1	78.8	77.5	79.2	80.0	TBD
IH 2018-SFR3		78.6	81.5	80.9	78.5	78.3	80.8	75.3	76.0	74.8	79.9	81.2	TBD
IH 2018-SFR4	~			78.0	83.6	81.8	77.7	80.5	78.1	75.3	78.1	80.7	TBD
PRD 2015-SFR3		76.7	71.4	70.5	71.4	75.4	81.3	76.8	72.9	76.6	76.3	76.8	TBD
PRD 2017-SFR1		74.8	78.4	77.1	79.3	71.1	72.6	73.5	73.8	79.2	77.7	74.1	TBD
PRD 2018-SFR1	~~~	78.5	74.4	76.5	81.0	72.4	73.2	80.2	77.6	71.6	78.8	72.4	TBD
PRD 2018-SFR2		100.0	50.0	78.5	81.7	76.4	80.6	76.8	78.6	81.2	74.4	73.7	TBD
PRD 2019-SFR2									76.9	79.2	78.8	80.2	TBD
PRD 2019-SFR3												84.7	TBD
SWH 2017-1		80.2	76.9	81.7	82.1	74.9	80.4	78.0	80.0	74.4	78.6	79.0	TBD
TAH 2016-SFR1		83.7	78.5	81.8	85.2	87.7	83.9	80.8	83.7	87.0	84.3	82.9	TBD
TAH 2017-SFR1		82.8	82.1	78.4	79.6	81.7	87.1	87.5	84.3	91.8	84.9	87.2	TBD
TAH 2017-SFR2		85.9	81.1	81.4	83.9	85.6	87.9	87.4	88.5	86.5	92.4	86.6	TBD
TAH 2018-SFR1		82.6	83.9	82.4	79.5	93.6	87.8	83.7	90.5	85.1	89.6	81.9	TBD
Overall SFR		79.0	78.3	79.3	80.8	79.4	80.4	79.3	78.2	77.3	78.5	78.7	TBD

TBD - To Be Determined







Table 11 – Monthly Retention Rate of MTM Leases (by Percentage)

Year 2018 Year 2019													
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
AH4R 2014-SFR2		85.8	85.6	86.1	85.9	89.1	86.8	83.2	78.2	82.3	82.7	84.4	TBD
AH4R 2014-SFR3		82.7	88.1	92.0	92.7	88.5	85.1	86.7	83.8	80.4	85.6	84.8	TBD
AH4R 2015-SFR1		85.6	80.9	84.1	91.6	88.2	80.9	87.9	78.5	83.3	81.0	84.9	TBD
AH4R 2015-SFR2		81.7	78.9	83.3	88.3	84.9	84.2	83.0	83.9	79.8	74.4	78.9	TBD
HPA 2017-1													TBD
HPA 2018-1													TBD
HPA 2019-1													TBD
IH 2017-SFR2		88.2	76.8	85.7	89.8	88.5	86.4	80.0	77.6	74.5	80.0	82.5	TBD
IH 2018-SFR1		86.4	83.6	86.6	88.9	81.4	85.2	89.1	80.3	81.2	81.2	86.2	TBD
IH 2018-SFR2	~~~	84.3	94.0	87.5	83.5	89.5	83.7	82.5	81.3	78.8	83.0	88.9	TBD
IH 2018-SFR3		86.8	87.3	81.9	84.2	82.6	82.6	87.4	81.6	82.0	80.5	85.6	TBD
IH 2018-SFR4				82.1	87.2	89.8	86.2	78.0	82.6	82.1	74.5	88.2	TBD
PRD 2015-SFR3		80.6	67.6	80.0	84.0	75.9	74.2	78.6	75.0	82.6	58.6	63.0	TBD
PRD 2017-SFR1		72.7	92.1	80.5	83.3	71.8	90.6	84.8	90.3	72.7	80.6	80.0	TBD
PRD 2018-SFR1		76.0	66.7	66.7	78.9	85.7	69.2	77.8	71.4	55.6	80.0	46.2	TBD
PRD 2018-SFR2		100.0	88.9	100.0	64.3	71.4	76.7	67.9	80.0	73.1	95.5	95.2	TBD
PRD 2019-SFR2									66.7	63.2	82.4	82.6	TBD
PRD 2019-SFR3												66.7	TBD
SWH 2017-1		84.1	78.3	74.1	85.5	87.2	78.3	80.9	76.6	69.0	76.2	75.8	TBD
TAH 2016-SFR1		95.7	93.2	95.3	92.8	95.9	92.5	91.6	97.4	89.5	90.5	83.0	TBD
TAH 2017-SFR1		93.1	84.8	88.9	93.2	87.3	89.9	90.0	95.6	83.8	95.5	83.6	TBD
TAH 2017-SFR2		96.0	86.4	87.8	94.3	90.8	89.7	70.9	95.2	90.8	89.5	81.7	TBD
TAH 2018-SFR1		91.3	97.4	81.2	93.7	90.9	90.0	76.5	96.8	91.3	92.6	89.2	TBD
Overall SFR		87.4	85.7	86.0	89.0	87.6	85.6	83.8	83.7	81.5	82.5	83.3	TBD
TBD – To Be Determined													

TBD - To Be Determined

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Table 12a – MTM Tenants (by Count)



					2040									lotal
		<u>Year 2018</u> Oct	Nov	Dec Y	ear 2019 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Count
AH4R 2014-SFR2		172	157	164	152	163	174	190	218	212	204	195	186	4,544
AH4R 2014-SFR3		185	168	155	159	172	192	189	209	231	218	212	195	4,587
AH4R 2015-SFR1		167	160	148	145	174	203	213	214	213	213	210	211	4,696
AH4R 2015-SFR2		151	141	141	125	146	169	179	197	233	237	202	170	4,175
HPA 2017-1		0	0	0	0	0	0	0	0	0	0	0	0	1,289
HPA 2018-1		0	0	0	0	0	0	0	0	0	0	0	0	1,687
HPA 2019-1												0	0	1,185
IH 2017-SFR2		68	69	63	59	61	119	140	136	146	134	134	125	4,299
IH 2018-SFR1		66	67	67	63	86	85	89	118	125	122	117	104	4,189
IH 2018-SFR2	~~	89	84	96	85	86	148	158	169	158	126	124	133	5,365
IH 2018-SFR3		115	118	116	101	109	179	193	202	190	167	166	161	6,536
IH 2018-SFR4				84	86	108	129	131	147	169	145	129	132	5,300
PRD 2015-SFR3		53	48	40	43	43	42	45	48	51	55	46	34	3,144
PRD 2017-SFR1		68	57	54	52	54	46	50	41	50	43	43	35	2,707
PRD 2018-SFR1		59	74	38	21	18	17	14	15	11	21	26	18	2,111
PRD 2018-SFR2		9	9	23	43	53	41	45	41	39	28	25	23	2,116
PRD 2019-SFR2	^								32	31	33	36	34	2,459
PRD 2019-SFR3	/											28	29	2,268
SWH 2017-1		69	60	54	55	86	71	86	114	115	111	95	82	4,327
TAH 2016-SFR1		233	232	205	194	179	184	187	168	182	173	162	144	3,399
TAH 2017-SFR1	~~~	118	111	100	83	81	92	98	81	92	76	73	76	3,475
TAH 2017-SFR2	~	108	112	101	95	91	92	95	68	92	87	84	76	2,619
TAH 2018-SFR1		89	88	90	88	85	88	92	64	78	70	75	69	2,509
Overall SFR		1,819	1,755	1,739	1,649	1,795	2,071	2,194	2,282	2,418	2,263	2,182	2,037	78,986

Total

Table 12b - MTM Tenants (by Percentage)



Year 2018 Year 2019													
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
AH4R 2014-SFR2		3.8	3.5	3.6	3.3	3.6	3.8	4.2	4.8	4.7	4.5	4.3	4.1
AH4R 2014-SFR3		4.1	3.7	3.4	3.5	3.7	4.2	4.1	4.6	5.0	4.8	4.6	4.3
AH4R 2015-SFR1		3.6	3.4	3.2	3.1	3.7	4.3	4.5	4.6	4.5	4.5	4.5	4.5
AH4R 2015-SFR2		3.7	3.4	3.4	3.0	3.5	4.0	4.3	4.7	5.6	5.7	4.8	4.1
HPA 2017-1		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HPA 2018-1		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HPA 2019-1												0.0	0.0
IH 2017-SFR2		1.6	1.6	1.4	1.4	1.4	2.7	3.2	3.1	3.4	3.1	3.1	2.9
IH 2018-SFR1		1.5	1.6	1.6	1.5	2.0	2.0	2.1	2.8	3.0	2.9	2.8	2.5
IH 2018-SFR2		1.6	1.5	1.8	1.6	1.6	2.7	2.9	3.1	2.9	2.3	2.3	2.5
IH 2018-SFR3		1.7	1.8	1.7	1.5	1.6	2.7	2.9	3.1	2.9	2.5	2.5	2.5
IH 2018-SFR4				1.6	1.6	2.0	2.4	2.4	2.7	3.2	2.7	2.4	2.5
PRD 2015-SFR3		1.7	1.5	1.3	1.4	1.4	1.3	1.4	1.5	1.6	1.7	1.5	1.1
PRD 2017-SFR1		2.5	2.1	2.0	1.9	2.0	1.7	1.8	1.5	1.8	1.6	1.6	1.3
PRD 2018-SFR1	~	2.8	3.5	1.8	1.0	0.9	0.8	0.7	0.7	0.5	1.0	1.2	0.9
PRD 2018-SFR2		0.4	0.4	1.1	2.0	2.5	1.9	2.1	1.9	1.8	1.3	1.2	1.1
PRD 2019-SFR2									1.3	1.3	1.3	1.5	1.4
PRD 2019-SFR3	/											1.2	1.3
SWH 2017-1		1.6	1.4	1.2	1.3	2.0	1.6	2.0	2.6	2.6	2.6	2.2	1.9
TAH 2016-SFR1		6.8	6.8	6.0	5.7	5.2	5.4	5.5	4.9	5.3	5.1	4.8	4.2
TAH 2017-SFR1		3.4	3.2	2.9	2.4	2.3	2.6	2.8	2.3	2.6	2.2	2.1	2.2
TAH 2017-SFR2		4.1	4.3	3.9	3.6	3.5	3.5	3.6	2.6	3.5	3.3	3.2	2.9
TAH 2018-SFR1		3.5	3.5	3.6	3.5	3.4	3.5	3.7	2.6	3.1	2.8	3.0	2.8
Overall SFR		2.7	2.6	2.4	2.2	2.4	2.8	3.0	3.0	3.2	3.0	2.8	2.6

Vear 2019

Table 13 – Monthly Turnover Rate (by Percentage)



	Year 2018 Year 2019													
			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
AH4R 2014-SFR2			2.8	2.0	2.3	2.2	2.4	2.5	2.9	4.1	4.4	4.2	3.7	TBD
AH4R 2014-SFR3			2.9	2.6	2.1	2.2	2.0	2.9	2.9	3.8	3.6	4.2	4.2	TBD
AH4R 2015-SFR1			3.2	2.3	2.6	2.7	2.4	3.1	2.7	3.6	4.4	3.9	3.7	TBD
AH4R 2015-SFR2			2.9	2.3	2.4	1.9	2.3	3.0	3.5	4.4	4.8	5.1	4.2	TBD
HPA 2017-1	~~~		2.3	3.1	2.0	2.9	2.5	2.4	3.1	2.8	2.3	3.5	3.6	TBD
HPA 2018-1			2.4	2.4	1.5	1.5	1.8	2.8	2.5	3.4	4.6	4.0	4.1	TBD
HPA 2019-1													0.4	TBD
IH 2017-SFR2			2.8	1.7	1.7	1.9	2.1	2.0	2.2	2.8	3.5	3.7	3.5	TBD
IH 2018-SFR1			2.6	2.5	2.0	2.5	1.9	3.0	2.4	2.4	2.9	3.2	3.8	TBD
IH 2018-SFR2			2.5	2.6	2.1	2.1	2.0	3.0	2.8	2.6	3.2	3.5	3.1	TBD
IH 2018-SFR3			2.4	2.6	2.2	2.4	2.3	2.6	2.7	2.7	3.1	3.2	3.0	TBD
IH 2018-SFR4					2.1	2.2	2.3	2.8	2.7	3.1	3.5	3.7	3.4	TBD
PRD 2015-SFR3			3.7	2.6	2.7	2.6	2.4	2.3	2.8	3.5	3.9	5.0	4.2	TBD
PRD 2017-SFR1			4.9	3.9	3.5	3.0	2.7	3.1	2.4	2.8	3.1	3.9	4.2	TBD
PRD 2018-SFR1			5.9	6.5	3.7	1.3	1.5	2.3	2.5	2.4	2.9	3.6	4.6	TBD
PRD 2018-SFR2			1.9	1.9	4.8	4.3	4.2	3.6	3.6	4.5	4.0	3.3	1.9	TBD
PRD 2019-SFR2										7.3	3.8	4.4	4.1	TBD
PRD 2019-SFR3													3.8	TBD
SWH 2017-1			2.8	2.0	1.7	2.4	2.8	2.7	3.3	2.8	3.6	3.6	3.2	TBD
TAH 2016-SFR1			2.7	2.0	1.8	1.8	1.8	3.0	2.2	2.8	1.5	3.3	2.9	TBD
TAH 2017-SFR1			2.3	2.2	3.0	2.0	2.5	3.3	1.5	2.1	1.6	2.6	1.8	TBD
TAH 2017-SFR2			3.4	2.2	2.2	1.4	2.1	3.4	1.6	2.5	5.0	1.3	2.6	TBD
TAH 2018-SFR1			3.2	1.9	2.1	2.1	2.4	2.7	1.8	2.4	2.1	2.2	2.8	TBD
Overall SFR			2.9	2.5	2.3	2.2	2.3	2.8	2.6	3.2	3.5	3.6	3.4	TBD
TDD To Do Dotorminad														

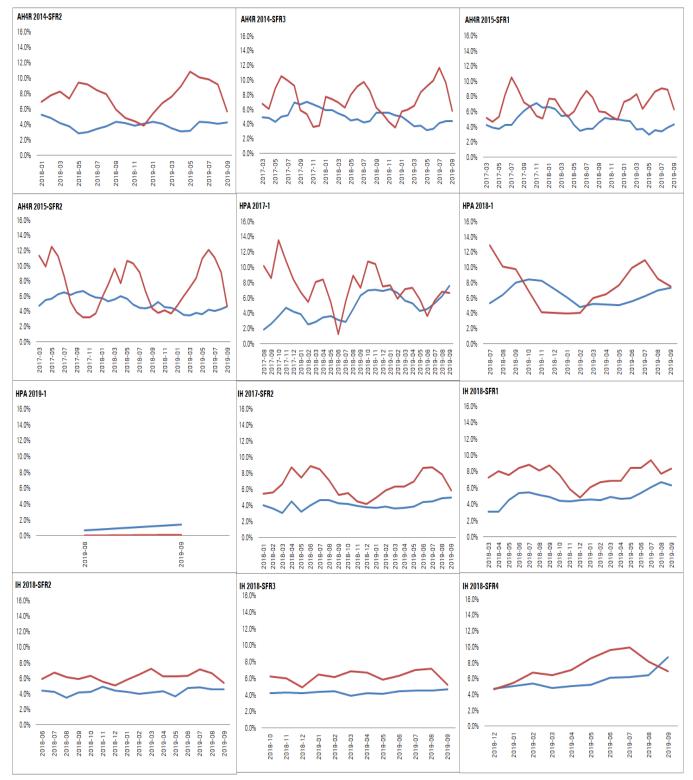
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TBD - To Be Determined



Appendix I – Vacancy Versus Lease Expiration











Appendix II – Description of Analysis

DBRS Morningstar tracks key metrics to gauge the performance of single-borrower, single-family rental transactions that DBRS Morningstar rates. There are several ways to view these metrics. For example, the vacancy rate might be calculated based on property count, by cash flow, or by days of occupancy. To account for different reporting across issuers, DBRS Morningstar seeks commonality across the single-borrower issuers' monthly reporting to derive its calculations.

Multiborrower deals are similar to single-borrower transactions in that the underlying collateral is generally single-family rental properties. They differ, though, in that single-borrower deals are backed by one loan, while multiborrower deals have many loans. As such, the monthly reporting for multiborrower deals is different from the data reported in the single-borrower sector. For example, delinquency reported in Tables 8a and 8b are tenants that are past due on rental payments at a property level. For multiborrower transactions, delinquency is measured by borrowers that are past due on payments at the loan level.

Table 1 – Multiborrower Loan Performance by Percentage of Balance

To calculate the percentage of loans delinquent, in foreclosure, and/or in special servicing, DBRS Morningstar takes the respective balance divided by the current deal balance.

Table 2 - Multiborrower Loan Performance by Loan Count

DBRS Morningstar shows the total loan count in a securitization and the number of loans 30-59 days delinquent, 60-89 days delinquent, over 90 days delinquent, in foreclosure, real estate owned, and in special servicing.

Chart 1 – Single-Family Rental Rent Change Versus RentRange Year-Over-Year Rent Change

To calculate the rent change across single-borrower, single-family rental transactions, DBRS Morningstar isolated the leases starting in a given period and compared the contractual rent in that period with the prior occupied contractual rent. DBRS Morningstar then compared this rent change with the year-over-year change in three- and four-bedroom median rents from RentRange. DBRS Morningstar weighted the RentRange median rents by geography to match the MSA concentration of the DBRS Morningstar single-family rental database.

Chart 2 – Rental Changes for Renewals Versus Vacant-to-Occupied Properties

DBRS Morningstar calculated the rent change using the contractual rent for the corresponding period versus the prior occupied contractual rent. To determine the lease expiration sample, DBRS Morningstar used the logic outlined in the Tables 6a, 6b, and



6c – Lease Expiration section. DBRS Morningstar then looked at the property tape to determine the renewed properties and compared that contractual rent with the prior contractual rent. For vacant properties subsequently occupied by new tenants, DBRS Morningstar isolated those properties that were vacant in a given month and occupied in the next month and again compared the current contractual rent with the prior contractual rent.

Chart 3 – September Average Contractual Rent Versus Property-Level RentRange Estimate by MSA

Chart 3, which shows some of the MSAs most frequently found in single-family rental securitizations, takes a snapshot of the contractual rents in the DBRS Morningstar single-family rental database and compares these rents with their property-specific rent estimates from RentRange.

Table 3 - Difference between Average Contractual Rent Versus Property-Level RentRange

Table 3 shows the percentage difference between contractual rents in the DBRS Morningstar single-family rental database and the property-specific estimated rents from RentRange. DBRS Morningstar calculated the percentage difference by subtracting the RentRange estimated rent from the contractual rent and dividing that figure by the estimated RentRange rent.

Chart 4 – MSA-Level Blended Rent Change

Chart 4 shows the blended rent change of some of the MSAs frequently found in single-family rental securitizations. The size of each circle represents the percentage of properties by count in each MSA from DBRS Morningstar's database. MSAs in red are below the overall average rent change for the month, while those in blue are above.

Table 4 – Blended Rent Change (by Percentage) – Top MSAs

Table 4 shows the MSA-level blended rent change for the past 12 months using the same rent change calculation used in Chart 1 and Chart 4.

Tables 5a, 5b, and 5c – Month-End Vacancy

Table 5a displays deal-level vacancy by the month-end count of empty properties. Table 5b shows the deal-level vacancy as a percentage of the total properties in each pool. Table 5c shows the MSA-level vacancy percentage for some of the MSAs frequently found in single-family rental securitizations. The vacancy rate is heavily influenced by the number of lease expirations in each month. Generally, the more leases expiring in a given month, the higher the vacancy rate will be. Because each transaction or MSA has a distinct lease expiration schedule, the vacancy rate should not be viewed at one point in time,



but rather in the context of its lease expiration cycle, as reported in Tables 6a, 6b, and 6c and as seen in the charts in Appendix I.

Chart 5 – MSA-Level Vacancy and Lease Expiration Percentage (by Count)

Chart 5 shows the vacancy rate of some of the MSAs frequently found in single-family rental securitizations. The size of each circle represents the percentage of leases expiring in the past three months. MSAs in red are above the overall average vacancy percentage for the month, while those in blue are below. Typically, the more leases expiring, the higher the vacancy rate.

Tables 6a, 6b, and 6c – Lease Expiration

Because lease expiration profiles change over time as tenants renew or new tenants occupy vacant properties, DBRS Morningstar seeks to rely on more recently published reporting of lease expirations, rather than solely using the lease expiration schedule from the cutoff date. To determine September lease expirations, DBRS Morningstar looks for all September lease expirations in the July property tape. DBRS Morningstar looks three months back to set a lease expiration sample that more accurately captures tenants who renew their leases in months before their scheduled lease expiration. Certain issuers have indicated that they proactively work to renew tenants a few months before the lease expiration date. Because DBRS Morningstar is looking three months back to determine its sample, there are instances when tenants vacate properties between the time DBRS Morningstar determines its sample and the month in which the tenant must make a decision to stay in the property. DBRS Morningstar excludes those vacated properties from its lease expiration sample and its retention rate calculation in Table 10. In the current example, properties that become vacant or that have move out dates in either July or August are removed from the September lease expiration count.

Tables 7a and 7b – Total Historical Months of Vacancy

Tables 7a and 7b show the number of months of vacancy the September unoccupied properties have experienced. In other words, if a property is unoccupied as of the September property tape, these tables summarize the number of total months the property has been vacant since the transaction cutoff date. Depending on the length of performance history, the overall vacancy may be in line with the number of consecutive vacant months, but this might not always be the case for those properties that have gone through multiple leasing cycles. Table 7a shows historical months of vacancy by count, and Table 7b is as a percentage of the September vacancies.



Tables 7c and 7d – Consecutive Months of Vacancy

Table 7c and 7d show the consecutive number of months an unoccupied property has been vacant since it was last occupied. For example, if a property is unoccupied as of September property tape, these tables reflect the number of consecutive months the property has been vacant and does not consider the number of vacant months prior to the most recent occupancy. Table 7c shows consecutive months of vacancy by count and Table 7d is as a percentage of the September vacancies.

Table 8 – Delinquency Definition

DBRS Morningstar's calculation of delinquency is based on the number of properties flagged as delinquent in the monthly property-level data. Each issuer uses its own criteria for classifying a tenant as delinquent. Table 8 summarizes the delinquency definition for each issuer and contains details on the length of time that must pass from a tenant's due date to be considered delinquent. The length of time is either based on a count of 30 days or is based on the calendar month. The slight distinction, for example, either results in a property with payment due on May 1 considered as delinquent after 30 days or as delinquent on June 1. None of the issuers factor a grace period into their delinquency definition, meaning their respective measures of past due begin if payment has not been received by the stated due date. In addition to timing, these conditions can also differ by the total dollar threshold an issuer uses to classify a tenant as delinquent and by the types of overdue payments that the issuer uses to count toward that threshold. For example, most issuers use only base rent to determine the dollar amount of delinquency. However, Tricon American Homes counts total receivables to determine the past due amount. Progress Residential includes certain fees above base rent but not total receivables.

Tables 9a and 9b – Month-End Delinquency

Table 9a shows the month-end count of delinquencies based on the definition in Table 8, and Table 9b shows delinquency as a percentage of the total number of properties in each pool. Any review of delinquency should be viewed within the context of the delinquency definitions in Table 8.

Table 10 – Monthly Retention Rate of Expiring Leases

When evaluating an issuer's ability to keep tenants in a property, DBRS Morningstar considers a retention rate. Once again, differences in monthly reporting affect the calculation that DBRS Morningstar uses. Typically, a renewal rate would review those tenants who signed a full-term lease. Considering the different methods issuers use to designate tenants with either a renewal or an MTM status, DBRS Morningstar opted to report the retention rate instead of the renewal rate. The retention rate is defined as those properties that retained previous tenants, whether on full-term or MTM leases, divided by the total number



of leases due to expire in that period, as reported in Table 6a and explained in Appendix II. If there is not enough seasoning in the deal to look three months back to determine the lease expiration sample, DBRS Morningstar relies on the cutoff tape lease expiration profile. As a result, the first three months of retention rate reported in Table 10 will use the cutoff tape to find the sample of lease expirations. After isolating the applicable lease expiration sample, DBRS Morningstar looks at the most recent property tape to determine the lease status of the properties. In this report, DBRS Morningstar uses the September property tape to determine the lease status for August expirations. DBRS Morningstar relies on the issuer's labeling of vacant, renewal, new lease, or MTM, to the extent that these notations are available in each tape.

Table 11 – Monthly Retention Rate of MTM Leases

In Table 11, DBRS Morningstar reviews the retention rate of those properties in an MTM status. This table looks at previous tenants who went to an MTM status and either renewed or remained in the property on an MTM basis. For the MTM retention rate, DBRS Morningstar looks for MTM tenants in the previous month's property tape, and then looks to the current month for their occupancy status. For example, the August 2019 retention rates are the August statuses of July MTM tenants.

Tables 12a and 12b - MTM Tenants

In Tables 12a and 12b, DBRS Morningstar shows the count and percentage of properties with MTM tenants. Securitizations with higher concentrations of MTM tenants typically report higher retention rates of their MTM leases. MTM tenants are usually subject to a monthly fee, which may encourage them to eventually sign full-term leases.

Table 13 – Monthly Turnover Rate

In evaluating how effective an issuer is at retaining tenants, DBRS Morningstar considers the monthly turnover rate. For this metric, DBRS Morningstar strives to apply a consistent calculation given the differences in issuers' reporting. DBRS Morningstar considers a property turned over if it meets one of three criteria:

- The property is vacant but was occupied in the previous month and the move-out date, if available, is on or after the first day of the current month;
- The move-out date is on or after the first day of the current month, including the last day of the current month; or
- The property was occupied in the prior month and a tenant has signed a new lease that starts on or after the second day of the current month.



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