

Single-Family Rental Research

Performance Summary Covering All Morningstar-Rated Securitizations

March 2018

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Introduction

For the first time since September 2017, the blended rent change increased by more than 3.0%, jumping 3.3% in February, compared with a 2.5% rise in January. The average vacancy rate across single-borrower, single-family rental securitizations rated by Morningstar Credit Ratings, LLC improved for the fourth-consecutive month, declining to 4.6% in February from 5.0% in January. The lower vacancy is likely due to fewer winter lease expirations and a continued strong average retention rate that now stands at 79.8% as of December, the most recent data available. Among the top 20 metropolitan statistical areas, the Houston MSA continued to have the highest vacancy rate at 7.3% in February, though it was down from 8.8% in January. The Nashville, Tennessee, MSA's vacancy rate remained the second-highest, declining to 5.9% in February from 7.3% in January. The Las Vegas, Orlando, Phoenix, and San Bernardino MSAs all experienced blended rent growth of at least 5.0%. The HPA 2016-1 transactions paid off, and the February data for IH 2017-SFR2 was not available as of the publishing, bringing the performance summary to 22 single-borrower deals with just under 82,000 properties. The IH 2017-SFR2 data includes approximately 4,400 properties that will be included in the April performance summary.

Morningstar publishes our performance summary to provide market participants detailed property-level information on each single-family rental securitization that Morningstar has rated. The data below summarizes issuer-reported property-level information through February. Page 5 includes a summary of the multiborrower transactions. For deals seasoned at least one year, we provide Morningstar Surveillance Analysis reports, available on our website, www.morningstarcreditratings.com.

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Single-Borrower Performance

The average vacancy rate fell to 4.6% in February and may improve further next month if historical seasonal trends continue. AMSR 2016-SFR1's vacancy rate declined to 7.7%, but remains the highest among single-borrower deals. The average retention rate on full-term leases remains strong at 79.8% in January, the latest month for which data is available, with all transactions reporting rates of at least 72.0% and 10 deals having retention rates greater than 80.0%. The overall turnover rate increased slightly to 2.6% in January, the latest month for which data is available, after six consecutive months of declines. The average delinquency rate improved to 0.7%, from a revised 0.8% in January, with only three deals posting a delinquency rate at or above 1.0%, down from six the month prior. AMSR 2016-SFR1 continues to have the highest delinquency rate, now at 2.2%. Please note that any review of delinquency should be viewed within the context of the delinquency definitions in Table 7.

Rents rose 3.3% in January, compared with an increase of 2.5% in January. Chart 1 shows that the rent gains for securitized properties increased above their RentRange benchmarks. 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 Morningstar database.

Chart 2 shows the rental change of renewals versus vacant-to-occupied properties. For January, the latest month for which data is available, the rent change for renewal properties remained unchanged and vacant-to-occupied properties increased by 1.0%. Chart 3 shows that the average contractual rents by MSA have been, with the exception of West Palm Beach, Florida, largely in line with or slightly higher than their property-level RentRange estimates. Chart 4 shows the MSA-level blended rent change. MSAs with rent changes above the 3.3% average are blue, while those below are red. The size of the circle indicates the percentage of properties by count from a given MSA in Morningstar's database. Table 3 shows the MSA-level blended rent change for the past 12 months.

Multiborrower Performance

There have been eight multiborrower transactions: B2R 2015-1, B2R 2015-2, B2R 2016-1, FKL 2015-SFR1, CAF 2015-1, CAF 2016-1, CAF 2016-2, and CAF 2017-1. As of the most recent remittance report, these transactions were secured by 785 total loans. The number of loans 30-59 days delinquent decreased to 10 from 15, while the number of loans 60-89 days delinquent increased to six from five, and the loans over 90 days delinquent rose to 17 from 16. Loans in foreclosure remained at three, and loans in special servicing increased to 30 from 28. FKL 2015-SFR1 had one loan exit special servicing, while B2R 2016-1, CAF 2016-2, and CAF 2017-1 each had one loan transferred to special servicing.



Table 1 – Multiborrower Loan Performance by Percentage of Balance

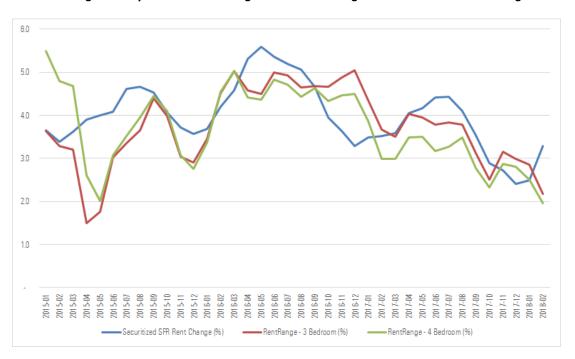
	30-59	60-89	90+		Real Estate	Special
	Delinquent	Delinquent	Delinquent	Foreclosure	Owned	Servicing
B2R 2015-1	0.4	0.0	0.5	0.3	0.0	0.8
FKL 2015-SFR1	0.0	0.0	0.0	0.0	0.0	0.0
CAF 2015-1	0.0	0.0	1.2	0.0	0.0	5.6
B2R 2015-2	0.6	0.1	1.1	0.2	0.0	1.3
CAF 2016-1	0.2	0.0	1.2	0.0	0.0	1.2
B2R 2016-1	1.7	0.3	1.2	0.0	0.0	2.0
CAF 2016-2	0.0	2.5	0.3	0.4	0.0	4.0
CAF 2017-1	0.0	0.4	0.3	0.0	0.0	1.4

Table 2 – Multiborrower Loan Performance by Loan Count

		30-59	60-89	90+		Real Estate	Special
	Total Loans	Delinquent	Delinquent	Delinquent	Foreclosure	Owned	Servicing
B2R 2015-1	129	1	0	2	1	0	4
FKL 2015-SFR1	15	0	0	0	0	0	0
CAF 2015-1	57	0	0	1	0	0	2
B2R 2015-2	194	3	1	6	1	0	7
CAF 2016-1	77	1	0	1	0	0	1
B2R 2016-1	157	5	2	3	0	0	8
CAF 2016-2	70	0	2	3	1	0	5
CAF 2017-1	86	0	1	1	0	0	3
Overall	785	10	6	17	3	0	30

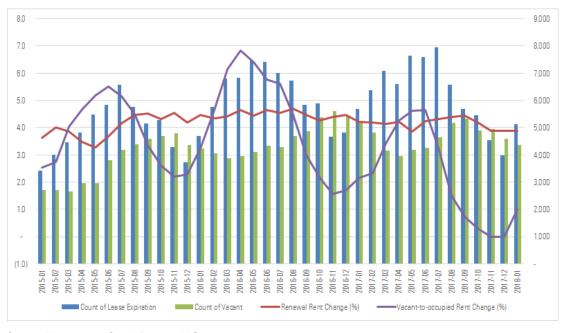
Single-Borrower Charts and Tables

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



Sources: Morningstar Credit Ratings, LLC; RentRange

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

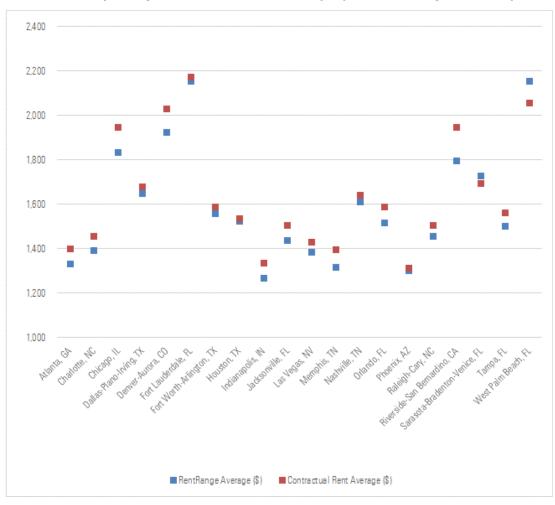


Source: Morningstar Credit Ratings, LLC

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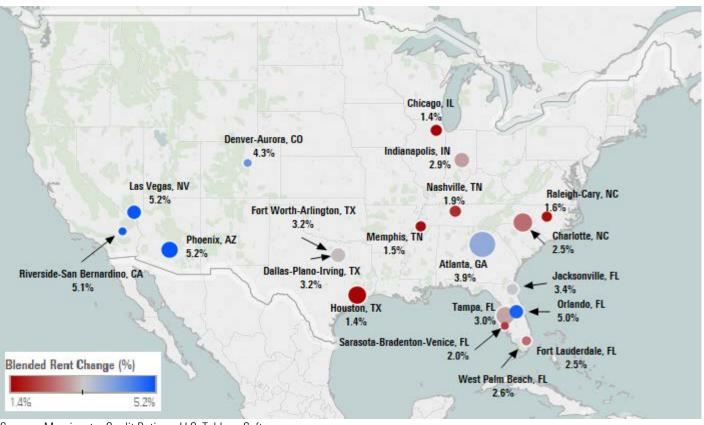
Chart 3 – February Average Contractual Rent Versus Property-Level RentRange Estimate by MSA



Sources: Morningstar Credit Ratings, LLC; RentRange



Chart 4 - MSA-Level Blended Rent Change*



Sources: Morningstar Credit Ratings, LLC; Tableau Software



^{*}The size of the circles represents the total percentage (by count) of properties in each MSA, ranging from 1.4% to 13.7%. Because of their proximity, the Fort Worth-Arlington, Texas, MSA is hidden behind the Dallas-Plano-Irving, Texas, MSA, and the West Palm Beach, Florida, MSA is hidden behind the Fort Lauderdale, Florida, MSA.

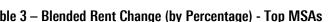




Table 3 -	- Rlended Rent	Change (hy	/ Percentage) -	. Ton MSAs
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		Year 2017									Ye	ar 2018	
		M	вг Ар	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Atlanta, GA		3	.9 4.5	4.6	5.0	4.9	4.6	4.4	4.3	3.6	3.5	3.1	3.9
Charlotte, NC		2	.9 4.1	4.1	4.3	4.1	3.2	3.0	2.7	1.7	1.0	1.4	2.5
Chicago, IL	~~~	1	.9 1.7	2.7	2.7	2.2	2.1	0.8	0.8	-0.2	-0.6	0.7	1.4
Dallas-Plano-Irving, TX		3	.8 4.4	4.9	5.2	5.2	4.3	4.1	2.8	2.8	2.4	2.5	3.2
Denver-Aurora, CO	~~~	6	.3 6.7	5.9	7.0	6.2	6.2	4.2	1.7	2.4	3.8	1.6	4.3
Fort Lauderdale, FL	~~~	2	.8 3.9	3.6	2.4	2.5	1.8	2.2	2.2	1.2	1.7	1.8	2.5
Fort Worth-Arlington, TX		4	.1 4.5	4.3	4.7	4.6	4.5	4.4	3.3	3.2	2.7	2.3	3.2
Houston, TX	~~	0	.5 1.9	1.7	1.1	1.5	1.6	-0.8	-0.4	-0.6	0.0	1.4	1.4
Indianapolis, IN		0	.7 1.6	2.4	3.4	3.0	3.1	2.0	1.8	0.4	0.2	-0.1	2.9
Jacksonville, FL	/	1	.7 2.2	2.9	3.6	4.3	3.5	3.7	3.3	2.6	2.3	3.0	3.4
Las Vegas, NV		4	.6 4.8	5.4	5.6	5.4	5.9	5.1	3.1	4.5	4.0	4.2	5.2
Memphis, TN	~	0	.2 0.5	0.8	2.1	2.3	2.7	2.4	1.0	0.2	-0.1	0.9	1.5
Nashville, TN		2	5 4.1	4.0	4.9	4.8	4.0	3.7	3.3	2.2	1.1	1.7	1.9
Orlando, FL		4	.1 4.8	4.9	4.9	5.2	4.7	4.1	3.2	4.0	4.0	3.2	5.0
Phoenix, AZ		5	.7 6.4	6.6	6.4	6.8	6.1	5.5	4.8	5.0	4.1	4.1	5.2
Raleigh-Cary, NC	~	3	.1 4.2	3.5	3.7	3.7	3.3	3.4	2.6	2.1	0.5	1.3	1.6
Riverside-San Bernardino, CA		4	.8 5.0	5.5	5.5	5.9	5.2	5.1	5.1	5.0	4.9	4.6	5.1
Sarasota-Bradenton-Venice, FL	~~	2	.3 2.3	2.7	2.9	2.1	1.4	1.0	0.4	1.0	0.4	0.8	2.0
Tampa, FL	~~	2	.7 3.4	3.1	3.7	3.6	3.2	2.6	1.7	2.4	2.1	2.1	3.0
West Palm Beach, FL	~~	3	.7 2.7	2.9	3.4	2.8	2.2	3.3	1.7	1.7	1.5	2.1	2.6

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Table 4a – Month-End Vacancy (by Count)



	Year 2017										v	ear 2018		Total <u>Count</u>
	M	er A	pr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Count
AH4R 2014-SFR2	1	64 10	35	194	209	209	230	251	248	235	215	233	217	4,481
AH4R 2014-SFR3	2	23 2	19	194	223	234	310	298	317	299	284	266	266	4,499
AH4R 2015-SFR1	19	98 1	33	175	197	198	243	282	312	331	304	309	295	4,658
AH4R 2015-SFR2	19	95 2	26	232	256	267	253	268	276	252	238	235	218	4, 124
AMSR 2016-SFR1	2	51 2	30	237	297	355	335	350	339	366	375	397	329	4,262
CAH 2015-1	10	60 19	94	224	249	239	261	225	214	226	230	176	165	3,780
CSH 2016-1	1:	55 1	33	176	176	194	215	207	214	207	207	202	180	3,540
CSH 2016-2	 1	73 1	36	184	189	241	266	241	230	254	257	256	229	3,988
HPA 2016-2	:	29	37	48	62	80	63	48	36	42	46	52	45	1,332
HPA 2017-1						19	26	36	50	64	57	53	34	1,358
IH 2015-SFR1	12	24 1	18	104	103	128	142	139	140	142	123	126	142	2,990
IH 2015-SFR2	14	15 13	38	161	157	171	187	160	165	171	172	184	179	3,495
IH 2015-SFR3	3	15 2	98	270	287	315	317	352	318	343	334	326	302	6,932
PRD 2015-SFR2	1	10 1	39	155	132	130	149	180	197	148	113	93	95	3,288
PRD 2015-SFR3		36	93	133	190	222	269	259	245	206	160	114	83	3, 150
PRD 2016-SFR1	2	32 2	38	229	239	279	314	311	304	277	244	227	215	5,555
PRD 2016-SFR2		34 10	01	108	144	181	282	265	238	162	122	104	104	3,743
PRD 2017-SFR1							131	187	203	183	150	94	67	2,709
SWH 2017-1										184	209	219	238	4,433
TAH 2016-SFR1	18	33 10	64	178	188	187	169	199	186	178	156	161	150	3,438
TAH 2017-SFR1								173	162	164	146	152	145	3,480
TAH 2017-SFR2												109	93	2,621
Overall SFR	2,8	57 2,9	12 3	3,002	3,298	3,649	4,162	4,431	4,394	4,434	4,142	4,088	3,791	81,856
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Table 4b - Month-End Vacancy (by Percentage)



	Year 2017									Yea	r 2018	
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
AH4R 2014-SFR2	3.7	3.7	4.3	4.7	4.7	5.1	5.6	5.5	5.2	4.8	5.2	4.8
AH4R 2014-SFR3	5.0	4.9	4.3	5.0	5.2	6.9	6.6	7.0	6.6	6.3	5.9	5.9
AH4R 2015-SFR1	4.2	3.9	3.8	4.2	4.2	5.2	6.1	6.7	7.1	6.5	6.6	6.3
AH4R 2015-SFR2	4.7	5.5	5.6	6.2	6.5	6.1	6.5	6.7	6.1	5.8	5.7	5.3
AMSR 2016-SFR1	5.9	5.4	5.6	7.0	8.3	7.9	8.2	8.0	8.6	8.8	9.3	7.7
CAH 2015-1	4.1	5.0	5.8	6.5	6.2	6.8	5.9	5.6	6.0	6.1	4.6	4.4
CSH 2016-1	4.4	5.1	4.9	4.9	5.4	6.0	5.8	6.0	5.8	5.8	5.7	5.1
CSH 2016-2	 4.3	4.7	4.6	4.7	6.0	6.7	6.0	5.8	6.4	6.4	6.4	5.7
HPA 2016-2	2.1	2.7	3.5	4.6	6.0	4.7	3.6	2.7	3.1	3.4	3.9	3.4
HPA 2017-1					1.4	1.9	2.6	3.6	4.7	4.2	3.9	2.5
IH 2015-SFR1	4.1	3.9	3.4	3.4	4.3	4.7	4.6	4.7	4.7	4.1	4.2	4.7
IH 2015-SFR2	4.1	3.9	4.6	4.5	4.9	5.3	4.6	4.7	4.9	4.9	5.3	5.1
IH 2015-SFR3	4.4	4.2	3.8	4.1	4.5	4.5	5.0	4.6	4.9	4.8	4.7	4.4
PRD 2015-SFR2	4.2	4.2	4.7	4.0	3.9	4.5	5.5	6.0	4.5	3.4	2.8	2.9
PRD 2015-SFR3	2.7	2.9	4.2	6.0	7.0	8.5	8.2	7.8	6.5	5.1	3.6	2.6
PRD 2016-SFR1	4.2	4.3	4.1	4.3	5.0	5.6	5.6	5.5	5.0	4.4	4.1	3.9
PRD 2016-SFR2	2.2	2.7	2.9	3.8	4.8	7.5	7.1	6.4	4.3	3.3	2.8	2.8
PRD 2017-SFR1						4.8	6.9	7.5	6.8	5.5	3.5	2.5
SWH 2017-1									4.2	4.7	4.9	5.4
TAH 2016-SFR1	5.3	4.8	5.2	5.5	5.4	4.9	5.8	5.4	5.2	4.5	4.7	4.4
TAH 2017-SFR1							5.0	4.7	4.7	4.2	4.4	4.2
TAH 2017-SFR2											4.2	3.5
Overall SFR	4.2	4.3	4.4	4.9	5.3	5.8	5.9	5.9	5.6	5.2	5.0	4.6





Table $4c-Month-End\ Vacancy\ (by\ Percentage)-Top\ MSAs$

		Year 2017									Yea	ar 2018	
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Atlanta, GA		4.1	4.1	5.6	5.1	4.4	4.9	4.8	5.0	4.7	4.4	4.6	4.6
Charlotte, NC		3.7	4.2	4.4	4.4	5.2	5.8	6.6	6.6	6.1	5.8	5.8	5.5
Chicago, IL		4.3	4.3	4.0	4.5	4.8	5.0	5.0	5.7	5.2	4.5	4.5	4.7
Dallas-Plano-Irving, TX		3.5	4.0	5.1	4.8	5.0	5.6	5.5	5.5	4.9	5.3	5.0	4.5
Denver-Aurora, CO		5.3	5.2	4.4	4.5	5.8	6.5	5.4	4.9	4.7	5.4	4.8	5.0
Fort Lauderdale, FL	~	5.8	6.7	5.9	6.0	6.3	6.3	6.7	6.8	6.1	5.8	5.1	4.3
Fort Worth-Arlington, TX		4.1	3.7	4.8	5.5	5.2	5.0	4.8	4.9	5.9	5.2	5.0	4.3
Houston, TX		6.0	5.8	6.2	6.9	7.9	9.2	9.8	10.0	9.4	8.8	8.8	7.3
Indianapolis, IN		4.3	4.8	4.1	5.1	6.3	6.7	6.7	6.2	5.6	5.3	4.4	5.1
Jacksonville, FL	~~~	3.5	4.1	4.1	3.7	4.4	5.1	6.4	5.8	5.2	4.5	4.6	4.1
Las Vegas, NV	~~_	3.0	4.1	3.6	4.3	4.3	4.4	4.5	3.8	3.5	3.6	2.6	2.5
Memphis, TN		5.0	4.1	4.5	5.5	6.3	6.7	7.3	7.3	6.2	5.3	5.2	4.3
Nashville, TN		4.3	3.6	4.1	5.3	6.2	7.1	7.1	7.6	8.0	7.5	7.3	5.9
Orlando, FL		3.3	3.4	3.8	3.9	4.5	4.8	4.8	4.5	3.8	3.5	3.3	3.2
Phoenix, AZ		2.9	3.3	3.6	4.4	5.2	5.5	4.5	4.8	4.8	4.0	3.2	3.3
Raleigh-Cary, NC		4.6	5.2	5.1	5.5	4.9	6.1	7.1	7.1	6.8	5.6	5.8	5.1
Riverside-San Bernardino, CA	~~~	4.3	4.3	3.3	4.2	3.3	3.6	3.4	3.8	3.7	4.3	3.8	4.3
Sarasota-Bradenton-Venice, FL		5.1	6.6	7.1	6.7	7.0	7.7	7.7	7.0	7.3	5.9	4.5	4.6
Tampa, FL		4.0	4.1	3.9	4.2	5.1	6.3	6.7	6.3	5.9	5.0	4.5	3.9
West Palm Beach, FL	~~~	6.8	5.8	6.7	6.4	5.7	6.4	7.1	6.8	5.4	5.0	4.4	4.6
12													



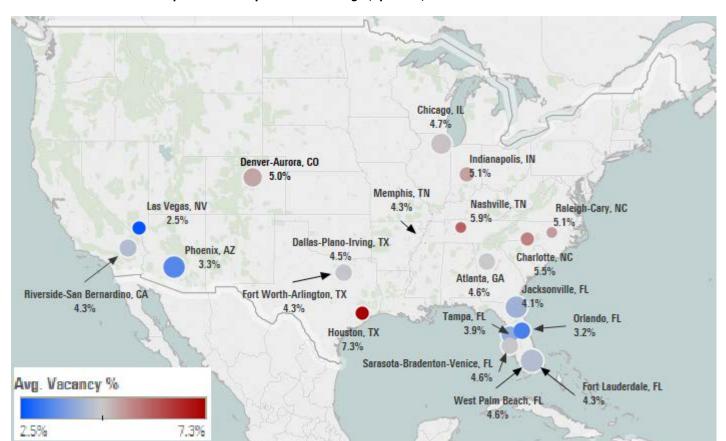


Chart 5 – MSA-Level Vacancy and Lease Expiration Percentage (by Count)*

Sources: Morningstar Credit Ratings, LLC; 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 15.0% to 19.7%. Because of their proximity, the Fort Worth-Arlington, Texas, MSA is hidden behind Dallas-Plano-Irving, Texas, MSA, and the West Palm Beach, Florida, MSA is hidden behind the Fort Lauderdale, Florida, MSA.

Table 5a – Lease Expiration (by Count)



		Year 2017										v	ear 2018		Total Count
			Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Count
AH4R 2014-SFR2			362	387	518	399	371	331	264	201	189	161	310	346	4,481
AH4R 2014-SFR3			306	273	398	474	448	416	265	241	160	171	348	332	4,499
AH4R 2015-SFR1			242	215	249	382	488	423	336	313	251	235	360	354	4,658
AH4R 2015-SFR2			466	407	516	464	355	214	159	132	133	151	238	310	4,124
AMSR 2016-SFR1			314	355	382	439	281	225	186	193	178	167	178	271	4,262
CAH 2015-1			200	268	294	368	393	378	298	287	266	175	215	207	3,780
CSH 2016-1	~~		294	331	282	337	340	273	264	234	191	170	197	221	3,540
CSH 2016-2			308	324	389	335	300	287	230	243	237	167	232	261	3,988
HPA 2016-2			139	212	276	386	179	11	5	6	10	16	14	12	1,332
HPA 2017-1							87	141	118	186	149	114	91	74	1,358
IH 2015-SFR1			192	166	138	164	209	191	162	220	185	164	221	234	2,990
IH 2015-SFR2			258	192	184	199	232	227	211	245	233	213	213	236	3,495
IH 2015-SFR3			520	395	368	405	446	499	388	537	464	375	470	522	6,932
PRD 2015-SFR2	~		266	215	391	186	192	118	179	221	185	142	189	234	3,288
PRD 2015-SFR3			68	164	345	353	525	284	216	157	93	76	81	120	3,150
PRD 2016-SFR1			502	470	448	394	358	176	216	322	230	286	330	426	5,555
PRD 2016-SFR2			87	101	318	402	639	426	270	209	127	113	150	145	3,743
PRD 2017-SFR1								112	279	381	229	197	162	133	2,709
SWH 2017-1											210	204	284	385	4,433
TAH 2016-SFR1	~~~		190	309	296	280	301	238	171	221	107	92	124	159	3,438
TAH 2017-SFR1									276	261	206	171	241	229	3,480
TAH 2017-SFR2	_												141	161	2,621
Overall SFR		4.	,714	4,784	5,792	5,967	6,144	4,970	4,493	4,810	4,033	3,560	4,789	5,372	81,856



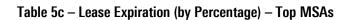
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Table 5b – Lease Expiration (by Percentage)



		Year 2017 Year 2017									ar 2018		
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
AH4R 2014-SFR2		8.1	8.6	11.6	8.9	8.3	7.4	5.9	4.5	4.2	3.6	6.9	7.7
AH4R 2014-SFR3		6.8	6.1	8.8	10.5	10.0	9.2	5.9	5.4	3.6	3.8	7.7	7.4
AH4R 2015-SFR1		5.2	4.6	5.3	8.2	10.5	9.1	7.2	6.7	5.4	5.0	7.7	7.6
AH4R 2015-SFR2	<u></u>	11.3	9.9	12.5	11.3	8.6	5.2	3.9	3.2	3.2	3.7	5.8	7.5
AMSR 2016-SFR1		7.4	8.3	9.0	10.3	6.6	5.3	4.4	4.5	4.2	3.9	4.2	6.4
CAH 2015-1		5.2	6.9	7.6	9.6	10.3	9.9	7.8	7.5	7.0	4.6	5.7	5.5
CSH 2016-1		8.3	9.3	7.9	9.5	9.5	7.7	7.4	6.6	5.4	4.8	5.6	6.2
CSH 2016-2		7.7	8.1	9.7	8.4	7.5	7.2	5.8	6.1	5.9	4.2	5.8	6.5
HPA 2016-2		10.0	15.5	20.2	28.6	13.3	0.8	0.4	0.4	0.7	1.2	1.1	0.9
HPA 2017-1	~~					6.3	10.2	8.6	13.6	10.9	8.4	6.7	5.4
IH 2015-SFR1		6.4	5.5	4.6	5.5	7.0	6.4	5.4	7.3	6.2	5.5	7.4	7.8
IH 2015-SFR2		7.3	5.5	5.2	5.7	6.6	6.5	6.0	7.0	6.6	6.1	6.1	6.8
IH 2015-SFR3		7.3	5.5	5.1	5.8	6.4	7.2	5.6	7.7	6.7	5.4	6.8	7.5
PRD 2015-SFR2	~~	8.1	6.5	11.9	5.6	5.8	3.6	5.4	6.7	5.6	4.3	5.7	7.1
PRD 2015-SFR3		2.2	5.2	10.9	11.2	16.6	9.0	6.9	5.0	3.0	2.4	2.6	3.8
PRD 2016-SFR1		9.0	8.4	8.0	7.1	6.4	3.2	3.9	5.8	4.1	5.1	5.9	7.7
PRD 2016-SFR2		2.3	2.7	8.5	10.7	17.1	11.4	7.2	5.6	3.4	3.0	4.0	3.9
PRD 2017-SFR1							4.1	10.3	14.1	8.5	7.3	6.0	4.9
SWH 2017-1										4.7	4.6	6.4	8.7
TAH 2016-SFR1	~~	5.5	9.0	8.6	8.1	8.8	6.9	5.0	6.4	3.1	2.7	3.6	4.6
TAH 2017-SFR1	~							7.9	7.5	5.9	4.9	6.9	6.6
TAH 2017-SFR2	/											5.4	6.1
Overall SFR		7.0	7.1	8.6	8.8	8.9	6.9	6.0	6.4	5.1	4.5	5.8	6.6

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	• , ,	Year 2017	•							Year 2018						
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb			
Atlanta, GA	<u></u>	6.8	7.2	8.4	8.9	8.8	6.7	6.3	6.0	5.2	4.6	5.8	6.3			
Charlotte, NC		6.0	6.9	7.7	8.5	9.2	7.7	7.4	7.2	5.0	4.4	5.2	6.0			
Chicago, IL		7.5	7.6	9.3	8.3	9.1	7.4	5.9	5.0	3.0	3.0	6.6	8.9			
Dallas-Plano-Irving, TX	~~	6.9	7.2	9.0	10.4	9.7	7.0	5.8	6.7	4.9	4.7	5.8	6.6			
Denver-Aurora, CO	~~	7.6	9.8	7.7	10.0	10.0	8.3	7.2	6.2	4.8	5.2	5.1	7.4			
Fort Lauderdale, FL	~~~	8.8	8.5	6.6	7.7	6.8	6.0	6.2	7.9	6.6	5.4	7.8	6.5			
Fort Worth-Arlington, TX	<u></u>	7.6	8.0	9.6	11.5	8.7	6.5	6.0	6.4	5.2	4.5	4.8	6.4			
Houston, TX		6.5	6.9	7.6	8.6	9.1	6.1	5.5	5.2	5.0	4.4	5.2	6.2			
Indianapolis, IN	~~~	6.3	9.1	10.5	9.6	11.6	7.4	5.1	5.0	2.3	1.9	6.9	7.3			
Jacksonville, FL		6.3	5.9	8.0	7.0	9.2	5.6	5.6	8.6	6.5	5.5	6.9	6.9			
Las Vegas, NV	~	6.5	7.8	8.4	9.4	9.9	7.7	6.4	6.8	5.2	4.4	5.4	5.9			
Memphis, TN	-~~	7.0	6.3	11.0	8.7	8.5	6.4	5.4	6.0	3.3	3.1	5.2	5.2			
Nashville, TN	~~~	7.2	7.9	9.8	10.3	8.5	6.4	5.4	7.4	4.6	4.1	5.3	5.4			
Orlando, FL		6.5	6.9	9.8	9.1	9.8	8.0	6.4	7.1	5.6	5.1	6.1	5.6			
Phoenix, AZ	~~~	7.1	5.8	7.8	7.5	8.9	7.4	5.9	8.0	5.6	5.2	6.7	7.3			
Raleigh-Cary, NC	~~~	6.5	6.1	10.7	9.8	10.0	7.7	6.8	7.6	5.2	4.0	4.3	6.6			
Riverside-San Bernardino, CA	~~	7.9	6.7	6.7	6.9	7.5	7.0	6.8	8.2	7.0	4.1	5.8	7.2			
Sarasota-Bradenton-Venice, F	~~~	7.4	6.5	6.6	7.8	8.7	7.7	7.2	8.0	6.1	5.4	4.7	6.9			
Tampa, FL		6.2	7.1	7.8	8.4	9.8	7.8	6.7	6.1	5.4	4.8	5.7	6.4			
West Palm Beach, FL	~~~	7.1	7.4	6.5	6.5	9.1	5.9	4.6	7.0	5.3	5.3	7.4	6.1			
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Table 6a — Historical Months of Vacancy for February Vacancies (by Count)

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		1	2	3	4	5	6	7	8	9	10	11	12+	Total
AH4R 2014-SFR2		22	30	49	35	26	20	14	10	3	4	3	1	217
AH4R 2014-SFR3	********	30	29	46	38	38	34	26	13	5	2	4	1	266
AH4R 2015-SFR1		36	38	60	53	34	31	19	14	6	2	1	1	295
AH4R 2015-SFR2		45	39	44	23	22	19	11	6	6	2	0	1	218
AMSR 2016-SFR1	ш	47	70	61	42	42	27	13	16	7	1	3	0	329
CAH 2015-1		23	30	39	25	18	10	8	6	3	2	0	1	165
CSH 2016-1		34	37	30	21	19	18	5	9	2	3	0	2	180
CSH 2016-2		68	56	41	19	10	19	8	4	2	1	0	1	229
HPA 2016-2		12	16	6	9	0	1	0	0	0	0	0	1	45
HPA 2017-1		12	13	4	4	0	1	0	0	0				34
IH 2015-SFR1		34	24	23	21	11	15	2	6	4	1	0	1	142
IH 2015-SFR2		28	38	41	29	17	12	3	2	4	2	1	2	179
IH 2015-SFR3	ш	64	62	59	33	31	22	10	9	4	5	1	2	302
PRD 2015-SFR2		24	19	22	5	9	6	5	1	0	2	1	1	95
PRD 2015-SFR3		15	12	11	8	8	9	8	5	3	0	4	0	83
PRD 2016-SFR1	h	83	51	22	20	11	14	10	1	2	0	1	0	215
PRD 2016-SFR2		0	36	33	14	10	6	2	2	1	0	0	0	104
PRD 2017-SFR1		36	20	3	2	1	5	0	0					67
SWH 2017-1	li	110	56	35	36	1								238
TAH 2016-SFR1		41	43	27	17	10	8	2	2	0	0	0	0	150
TAH 2017-SFR1	h	72	49	15	6	1	2	0						145
TAH 2017-SFR2		31	55	7										93
Overall SFR	<u> </u>	867	823	678	460	319	279	146	106	52	27	19	15	3,791



Table 6b – Historical Months of Vacancy for February Vacancies (by Percentage)

$\frac{1}{\sqrt{1-x}}$

	-	1	2	3	4	5	6	7	8	9	10	11	12+	Total
AH4R 2014-SFR2		10.1	13.8	22.6	16.1	12.0	9.2	6.5	4.6	1.4	1.8	1.4	0.5	100.0
AH4R 2014-SFR3		11.3	10.9	17.3	14.3	14.3	12.8	9.8	4.9	1.9	0.8	1.5	0.4	100.0
AH4R 2015-SFR1		12.2	12.9	20.3	18.0	11.5	10.5	6.4	4.7	2.0	0.7	0.3	0.3	100.0
AH4R 2015-SFR2		20.6	17.9	20.2	10.6	10.1	8.7	5.0	2.8	2.8	0.9	0.0	0.5	100.0
AMSR 2016-SFR1		14.3	21.3	18.5	12.8	12.8	8.2	4.0	4.9	2.1	0.3	0.9	0.0	100.0
CAH 2015-1		13.9	18.2	23.6	15.2	10.9	6.1	4.8	3.6	1.8	1.2	0.0	0.6	100.0
CSH 2016-1		18.9	20.6	16.7	11.7	10.6	10.0	2.8	5.0	1.1	1.7	0.0	1.1	100.0
CSH 2016-2	111	29.7	24.5	17.9	8.3	4.4	8.3	3.5	1.7	0.9	0.4	0.0	0.4	100.0
HPA 2016-2	ш	26.7	35.6	13.3	20.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	2.2	100.0
HPA 2017-1	Ш	35.3	38.2	11.8	11.8	0.0	2.9	0.0	0.0	0.0				100.0
IH 2015-SFR1		23.9	16.9	16.2	14.8	7.7	10.6	1.4	4.2	2.8	0.7	0.0	0.7	100.0
IH 2015-SFR2		15.6	21.2	22.9	16.2	9.5	6.7	1.7	1.1	2.2	1.1	0.6	1.1	100.0
IH 2015-SFR3		21.2	20.5	19.5	10.9	10.3	7.3	3.3	3.0	1.3	1.7	0.3	0.7	100.0
PRD 2015-SFR2	111	25.3	20.0	23.2	5.3	9.5	6.3	5.3	1.1	0.0	2.1	1.1	1.1	100.0
PRD 2015-SFR3		18.1	14.5	13.3	9.6	9.6	10.8	9.6	6.0	3.6	0.0	4.8	0.0	100.0
PRD 2016-SFR1	l1	38.6	23.7	10.2	9.3	5.1	6.5	4.7	0.5	0.9	0.0	0.5	0.0	100.0
PRD 2016-SFR2	H	0.0	34.6	31.7	13.5	9.6	5.8	1.9	1.9	1.0	0.0	0.0	0.0	100.0
PRD 2017-SFR1	lı	53.7	29.9	4.5	3.0	1.5	7.5	0.0	0.0					100.0
SWH 2017-1	1.1.	46.2	23.5	14.7	15.1	0.4								100.0
TAH 2016-SFR1	11	27.3	28.7	18.0	11.3	6.7	5.3	1.3	1.3	0.0	0.0	0.0	0.0	100.0
TAH 2017-SFR1	l1	49.7	33.8	10.3	4.1	0.7	1.4	0.0						100.0
TAH 2017-SFR2	ıl.	33.3	59.1	7.5										100.0
Overall SFR	ш	22.9	21.7	17.9	12.1	8.4	7.4	3.9	2.8	1.4	0.7	0.5	0.4	100.0
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Table 7 – 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
Amherst	Past due one calendar month or more (not dependent on day count) and owing \$500 or more
Colony American Homes/Colony	
Starwood Homes/Starwood	Past due one calendar month or more (not dependent on day count) and owing \$200 or more
Waypoint Homes	
Home Partners of America	Past due 30 days or more (not dependent on calendar month) and owing \$500 or more
Invitation Homes	Past due 30 days or more (not dependent on calendar month) and owing 25% of one month's rent 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

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



² Based on total receivables.



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		V 2017											2010		Total
		Year 2017	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec Y	Jan	Feb	Count
AH4R 2014-SFR2			21	14	12	10	13	15	9	21	19	20	20	22	4,481
AH4R 2014-SFR3			12	11	8	9	7	11	7	21	12	14	19	20	4,499
AH4R 2015-SFR1			20	12	10	10	12	14	21	26	28	26	22	29	4,658
AH4R 2015-SFR2			12	3	6	7	7	6	10	17	24	10	21	18	4,124
AMSR 2016-SFR1			56	67	78	114	171	78	66	97	111	114	98	95	4,262
CAH 2015-1			23	17	17	18	17	22	30	28	31	32	20	23	3,780
CSH 2016-1			22	17	20	15	24	21	29	28	26	29	33	26	3,540
CSH 2016-2			40	21	17	30	27	23	43	34	40	48	37	36	3,988
HPA 2016-2			11	8	6	6	9	12	19	17	12	16	9	10	1,332
HPA 2017-1							9	13	17	12	11	7	10	10	1,358
IH 2015-SFR1			25	22	21	36	33	36	29	45	41	44	37	30	2,990
IH 2015-SFR2	~~~		33	38	28	33	42	32	45	38	39	40	34	26	3,495
IH 2015-SFR3			63	75	71	80	99	115	89	94	100	120	101	59	6,932
PRD 2015-SFR2			13	18	15	14	19	14	26	25	23	24	28	21	3,288
PRD 2015-SFR3			4	8	9	8	16	19	22	23	17	22	29	25	3,150
PRD 2016-SFR1			24	26	20	24	28	29	27	43	45	44	39	40	5,555
PRD 2016-SFR2			11	10	14	18	20	16	24	23	19	39	41	0	3,743
PRD 2017-SFR1								14	20	19	16	17	17	22	2,709
SWH 2017-1											34	36	45	45	4,433
TAH 2016-SFR1			31	29	26	15	9	5	3	2	15	15	18	23	3,438
TAH 2017-SFR1									25	19	14	12	10	12	3,480
TAH 2017-SFR2													7	9	2,621
Overall SFR			421	396	378	447	562	495	561	632	677	729	695	601	81,856







	•	, , ,	• ,										
		Year 2017 Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec Ves	ar 2018 Jan	Feb
AH4R 2014-SFR2		0.5	0.3	0.3	0.2	0.3	0.3	0.2	0.5	0.4	0.4	0.4	0.5
AH4R 2014-SFR3		0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.3	0.3	0.4	0.4
AH4R 2015-SFR1		0.4	0.3	0.2	0.2	0.3	0.3	0.5	0.6	0.6	0.6	0.5	0.6
AH4R 2015-SFR2		0.3	0.1	0.1	0.2	0.2	0.1	0.2	0.4	0.6	0.2	0.5	0.4
AMSR 2016-SFR1		1.3	1.6	1.8	2.7	4.0	1.8	1.5	2.3	2.6	2.7	2.3	2.2
CAH 2015-1		0.6	0.4	0.4	0.5	0.4	0.6	0.8	0.7	0.8	0.8	0.5	0.6
CSH 2016-1		0.6	0.5	0.6	0.4	0.7	0.6	0.8	0.8	0.7	0.8	0.9	0.7
CSH 2016-2		1.0	0.5	0.4	0.8	0.7	0.6	1.1	0.9	1.0	1.2	0.9	0.9
HPA 2016-2		0.8	0.6	0.4	0.4	0.7	0.9	1.4	1.3	0.9	1.2	0.7	0.8
HPA 2017-1						0.6	0.9	1.2	0.9	0.8	0.5	0.7	0.7
IH 2015-SFR1		0.8	0.7	0.7	1.2	1.1	1.2	1.0	1.5	1.4	1.5	1.2	1.0
IH 2015-SFR2	~~~	0.9	1.1	0.8	0.9	1.2	0.9	1.3	1.1	1.1	1.1	1.0	0.7
IH 2015-SFR3		0.9	1.0	1.0	1.1	1.4	1.6	1.3	1.3	1.4	1.7	1.5	0.9
PRD 2015-SFR2	~~~	0.4	0.5	0.5	0.4	0.6	0.4	0.8	0.8	0.7	0.7	0.9	0.6
PRD 2015-SFR3		0.1	0.3	0.3	0.3	0.5	0.6	0.7	0.7	0.5	0.7	0.9	0.8
PRD 2016-SFR1		0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.8	0.8	0.8	0.7	0.7
PRD 2016-SFR2		0.3	0.3	0.4	0.5	0.5	0.4	0.6	0.6	0.5	1.0	1.1	0.0
PRD 2017-SFR1	~						0.5	0.7	0.7	0.6	0.6	0.6	0.8
SWH 2017-1										0.8	0.8	1.0	1.0
TAH 2016-SFR1		0.9	0.8	0.8	0.4	0.3	0.1	0.1	0.1	0.4	0.4	0.5	0.7
TAH 2017-SFR1								0.7	0.5	0.4	0.3	0.3	0.3
TAH 2017-SFR2												0.3	0.3
Overall SFR		0.6	0.6	0.6	0.7	0.8	0.7	0.7	0.8	0.9	0.9	0.8	0.7
04													





Table 9 – Monthly Retention Rate of Expiring Leases

		Year 2017									Ye.	ar 2018	
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
AH4R 2014-SFR2		84.8	75.2	74.1	73.2	76.0	73.1	74.6	78.6	75.1	75.2	77.4	TBD
AH4R 2014-SFR3	^	73.9	83.2	71.1	75.5	71.4	72.6	73.6	71.0	78.1	78.9	76.7	TBD
AH4R 2015-SFR1		75.6	72.1	69.1	73.0	74.8	74.9	75.9	75.7	77.3	76.2	75.3	TBD
AH4R 2015-SFR2		77.9	75.4	73.6	69.2	72.7	67.3	62.9	78.0	68.4	76.2	76.1	TBD
AMSR 2016-SFR1		83.8	82.3	80.1	77.2	83.3	79.6	87.1	86.0	87.1	85.6	88.8	TBD
CAH 2015-1		80.0	76.1	75.2	72.8	76.1	73.5	80.2	81.5	74.4	77.1	83.3	TBD
CSH 2016-1		82.0	78.5	77.7	76.0	76.2	75.5	76.1	83.3	73.8	79.4	76.6	TBD
CSH 2016-2	~~	75.6	80.2	76.6	75.8	68.0	68.3	73.0	78.6	67.5	73.1	78.9	TBD
HPA 2016-2		88.5	85.8	81.9	76.2	84.4	63.6	100.0	66.7	90.0	81.3	78.6	TBD
HPA 2017-1	~~					81.6	85.1	80.5	82.3	89.3	83.3	87.9	TBD
IH 2015-SFR1		82.3	80.7	81.9	76.2	77.0	75.4	85.8	77.3	78.9	78.7	83.3	TBD
IH 2015-SFR2	~~~	79.8	77.6	71.2	70.4	73.3	82.8	77.3	78.8	80.7	76.5	73.2	TBD
IH 2015-SFR3		79.4	75.4	78.0	80.2	75.1	78.6	78.6	79.5	80.0	79.5	83.0	TBD
PRD 2015-SFR2		77.8	74.9	77.7	72.0	75.5	70.3	72.1	78.7	80.0	83.1	79.9	TBD
PRD 2015-SFR3		73.5	73.8	73.3	71.4	71.4	66.9	67.1	73.9	77.4	73.7	72.8	TBD
PRD 2016-SFR1		81.9	77.4	81.0	76.6	69.8	65.9	68.5	79.5	77.0	76.9	80.9	TBD
PRD 2016-SFR2		72.4	77.2	81.1	80.8	75.6	70.4	77.0	79.4	80.3	80.5	87.3	TBD
PRD 2017-SFR1	<i></i>						69.6	73.1	79.8	76.0	76.1	82.1	TBD
SWH 2017-1	^									74.8	84.8	81.3	TBD
TAH 2016-SFR1		78.9	81.2	81.8	77.9	82.7	85.3	81.3	82.8	78.5	84.8	81.5	TBD
TAH 2017-SFR1								77.2	82.8	84.0	88.3	79.3	TBD
TAH 2017-SFR2												76.6	TBD
Overall SFR		79.7	78.1	76.7	75.1	75.0	74.1	75.9	79.4	77.9	79.2	79.8	TBD
TBD – To Be Determined													

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Table 10 – Monthly Retention Rate of MTM Leases

		Year 2017									Y	ear 2018	
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
AH4R 2014-SFR2		85.9	87.2	81.3	78.5	78.9	80.4	82.4	83.7	87.4	86.8	89.7	TBD
AH4R 2014-SFR3		88.2	83.0	84.3	77.7	78.6	81.9	86.0	83.2	81.4	89.2	90.0	TBD
AH4R 2015-SFR1		82.5	82.5	79.0	80.8	81.4	81.3	81.3	81.0	87.1	84.9	85.9	TBD
AH4R 2015-SFR2		81.4	82.1	77.5	75.9	79.3	81.1	81.2	87.0	80.9	88.8	86.4	TBD
AMSR 2016-SFR1		94.8	96.7	94.7	90.6	94.2	92.4	96.7	95.7	95.0	93.7	98.2	TBD
CAH 2015-1		80.0	61.9	67.5	62.5	77.8	81.1	72.5	80.0	74.4	78.0	72.5	TBD
CSH 2016-1		68.8	76.9	65.9	73.2	66.0	75.6	78.9	67.5	75.0	79.3	77.8	TBD
CSH 2016-2		72.7	73.0	81.1	62.9	70.2	78.4	57.5	62.9	70.4	74.1	75.0	TBD
HPA 2016-2					100.0	100.0	100.0	100.0					TBD
HPA 2017-1													TBD
IH 2015-SFR1		68.5	92.7	77.8	74.5	78.6	80.4	87.8	88.4	91.7	92.0	90.0	TBD
IH 2015-SFR2		86.7	79.1	77.8	85.7	70.7	93.3	87.2	91.8	88.9	84.8	79.2	TBD
IH 2015-SFR3	~~~	86.7	78.6	73.9	80.3	83.5	82.1	83.5	84.5	86.0	82.0	87.4	TBD
PRD 2015-SFR2		73.8	83.6	80.3	73.3	72.6	72.7	82.6	81.0	78.6	79.5	80.6	TBD
PRD 2015-SFR3		75.5	82.5	78.3	65.0	75.9	73.7	78.6	75.7	75.5	76.7	83.3	TBD
PRD 2016-SFR1		79.3	79.7	81.5	73.6	79.5	80.0	80.7	88.0	81.8	81.9	85.0	TBD
PRD 2016-SFR2		82.2	81.4	81.4	74.6	78.3	73.9	77.2	78.8	76.8	81.8	100.0	TBD
PRD 2017-SFR1							81.3	73.5	76.3	66.7	91.4	82.1	TBD
SWH 2017-1										61.3	80.8	75.0	TBD
TAH 2016-SFR1	~~	95.3	93.1	92.7	92.7	92.2	91.3	93.6	95.1	95.5	92.9	95.5	TBD
TAH 2017-SFR1	\sim							88.1	92.5	93.5	87.0	90.2	TBD
TAH 2017-SFR2												98.2	TBD
Overall SFR		86.3	86.2	84.0	81.2	83.7	84.6	86.9	88.2	88.1	88.5	91.6	TBD
TBD — To Be Determined													







		Year 2017										/ear 2018		Total Count
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Count
AH4R 2014-SFR2		176	216	256	273	251	245	217	185	178	175	170	190	4,481
AH4R 2014-SFR3		174	190	210	222	227	216	199	180	168	148	155	188	4,499
AH4R 2015-SFR1		208	202	202	189	221	229	227	198	195	187	184	204	4,658
AH4R 2015-SFR2		171	186	238	239	215	207	179	147	156	143	143	150	4,124
AMSR 2016-SFR1		433	479	514	576	574	600	605	648	684	709	696	733	4,262
CAH 2015-1		45	42	40	40	36	37	40	40	43	41	40	36	3,780
CSH 2016-1		32	39	41	41	47	41	38	40	36	29	27	28	3,540
CSH 2016-2		44	37	53	62	47	37	40	35	27	27	28	33	3,988
HPA 2016-2		0	0	0	1	1	1	1	0	0	0	0	0	1,332
HPA 2017-1						0	0	0	0	0	0	0	0	1,358
IH 2015-SFR1		66	64	64	68	67	54	57	61	65	63	55	68	2,990
IH 2015-SFR2		86	90	81	77	79	51	69	63	79	87	78	78	3,495
IH 2015-SFR3		169	162	163	146	149	137	131	149	160	164	158	166	6,932
PRD 2015-SFR2		96	97	119	96	76	71	63	66	64	49	55	58	3,288
PRD 2015-SFR3		60	67	91	96	112	115	110	87	60	52	49	50	3,150
PRD 2016-SFR1		182	203	187	170	151	125	116	122	111	120	119	127	5,555
PRD 2016-SFR2		54	58	95	103	122	137	123	99	85	70	71	201	3,743
PRD 2017-SFR1							47	62	76	67	49	46	47	2,709
SWH 2017-1										31	26	24	28	4,433
TAH 2016-SFR1		278	287	298	311	348	371	379	360	377	339	257	252	3,438
TAH 2017-SFR1	~							207	197	217	225	195	197	3,480
TAH 2017-SFR2												229	195	2,621
Overall SFR		2,274	2,419	2,652	2,710	2,723	2,721	2,863	2,753	2,803	2,703	2,779	3,029	81,856
0.4														



Table 11b – MTM Tenants (by Percentage)



		Year 2017									Y	ear 2018	
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
AH4R 2014-SFR2		3.9	4.8	5.7	6.1	5.6	5.5	4.8	4.1	4.0	3.9	3.8	4.2
AH4R 2014-SFR3		3.9	4.2	4.7	4.9	5.0	4.8	4.4	4.0	3.7	3.3	3.4	4.2
AH4R 2015-SFR1		4.5	4.3	4.3	4.1	4.7	4.9	4.9	4.2	4.2	4.0	4.0	4.4
AH4R 2015-SFR2		4.1	4.5	5.8	5.8	5.2	5.0	4.3	3.6	3.8	3.5	3.5	3.6
AMSR 2016-SFR1		10.2	11.2	12.1	13.5	13.5	14.1	14.2	15.2	16.0	16.6	16.3	17.2
CAH 2015-1		1.2	1.1	1.0	1.0	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.0
CSH 2016-1		0.9	1.1	1.2	1.2	1.3	1.2	1.1	1.1	1.0	0.8	0.8	0.8
CSH 2016-2		1.1	0.9	1.3	1.6	1.2	0.9	1.0	0.9	0.7	0.7	0.7	0.8
HPA 2016-2		0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
HPA 2017-1						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IH 2015-SFR1		2.2	2.1	2.1	2.3	2.2	1.8	1.9	2.0	2.2	2.1	1.8	2.3
IH 2015-SFR2		2.4	2.6	2.3	2.2	2.3	1.5	2.0	1.8	2.3	2.5	2.2	2.2
IH 2015-SFR3		2.4	2.3	2.3	2.1	2.1	2.0	1.9	2.1	2.3	2.4	2.3	2.4
PRD 2015-SFR2		2.9	2.9	3.6	2.9	2.3	2.2	1.9	2.0	1.9	1.5	1.7	1.8
PRD 2015-SFR3		1.9	2.1	2.9	3.0	3.5	3.6	3.5	2.8	1.9	1.7	1.6	1.6
PRD 2016-SFR1		3.3	3.6	3.4	3.1	2.7	2.2	2.1	2.2	2.0	2.2	2.1	2.3
PRD 2016-SFR2		1.4	1.5	2.5	2.8	3.3	3.7	3.3	2.6	2.3	1.9	1.9	5.4
PRD 2017-SFR1							1.7	2.3	2.8	2.5	1.8	1.7	1.7
SWH 2017-1	<u> </u>									0.7	0.6	0.5	0.6
TAH 2016-SFR1		8.1	8.3	8.7	9.0	10.1	10.8	11.0	10.5	11.0	9.9	7.5	7.3
TAH 2017-SFR1	~							5.9	5.7	6.2	6.5	5.6	5.7
TAH 2017-SFR2												8.7	7.4
Overall SFR		3.4	3.6	3.9	4.0	4.0	3.8	3.8	3.7	3.5	3.4	3.4	3.7
25													



Table 12 – Monthly Turnover Rate

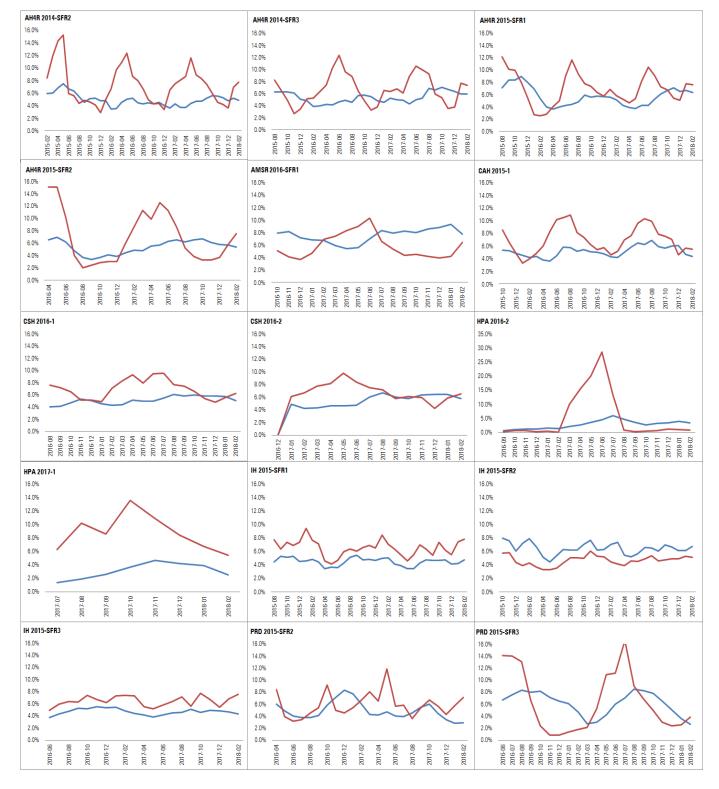
·		Year 2017									Ye	ear 2018	
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
AH4R 2014-SFR2		2.5	3.5	4.9	4.6	3.9	3.9	2.9	2.9	2.5	2.2	2.8	TBD
AH4R 2014-SFR3		3.2	2.5	3.9	4.3	5.1	4.3	3.4	3.1	2.1	2.4	2.6	TBD
AH4R 2015-SFR1		2.9	2.9	3.9	4.2	4.2	4.1	3.9	3.4	2.8	2.8	3.4	TBD
AH4R 2015-SFR2		4.3	3.9	5.0	5.8	4.4	3.7	3.3	2.5	2.3	2.9	2.5	TBD
AMSR 2016-SFR1	~	2.7	2.3	2.8	3.5	3.3	2.5	2.1	2.1	2.0	2.2	2.8	TBD
CAH 2015-1		2.3	3.1	4.0	4.6	3.8	4.1	2.7	3.2	2.8	2.3	1.9	TBD
CSH 2016-1		2.8	3.5	3.4	3.9	3.4	3.6	2.9	2.9	2.6	2.1	2.2	TBD
CSH 2016-2	~~_	3.5	3.1	4.1	3.4	4.3	4.5	3.0	3.2	3.0	2.4	2.6	TBD
HPA 2016-2		2.1	2.8	4.4	7.5	3.6	1.9	1.0	1.6	2.2	1.2	1.7	TBD
HPA 2017-1	~~					2.2	2.5	2.3	3.6	2.3	1.7	1.6	TBD
IH 2015-SFR1	~~~	2.7	2.7	2.3	2.6	3.6	3.6	2.2	3.1	2.5	2.2	2.4	TBD
IH 2015-SFR2	~~~	2.9	2.4	3.2	3.6	3.4	3.8	2.1	3.0	2.8	2.5	2.8	TBD
IH 2015-SFR3		3.1	2.4	2.7	3.0	3.0	3.4	2.8	2.6	2.8	2.3	2.6	TBD
PRD 2015-SFR2		3.6	3.2	4.2	3.7	3.0	3.2	3.1	2.9	2.5	2.2	2.4	TBD
PRD 2015-SFR3		2.4	2.1	4.1	5.5	7.1	4.6	4.2	3.0	2.4	2.0	2.0	TBD
PRD 2016-SFR1		3.6	3.4	3.6	4.0	3.5	3.2	3.2	2.9	2.4	2.6	2.6	TBD
PRD 2016-SFR2		2.1	2.2	2.9	4.2	5.2	5.3	3.2	3.0	1.7	1.7	2.0	TBD
PRD 2017-SFR1							7.5	4.3	4.1	3.8	3.5	2.4	TBD
SWH 2017-1	_									2.0	2.3	2.4	TBD
TAH 2016-SFR1	~~~	2.8	2.4	3.1	3.4	3.1	2.8	3.5	2.2	2.5	1.7	2.1	TBD
TAH 2017-SFR1								6.6	3.3	2.7	2.0	3.1	TBD
TAH 2017-SFR2												6.3	TBD
Overall SFR		3.0	2.9	3.6	4.1	3.9	3.8	3.2	2.9	2.5	2.3	2.6	TBD
TBD — To Be Determined													

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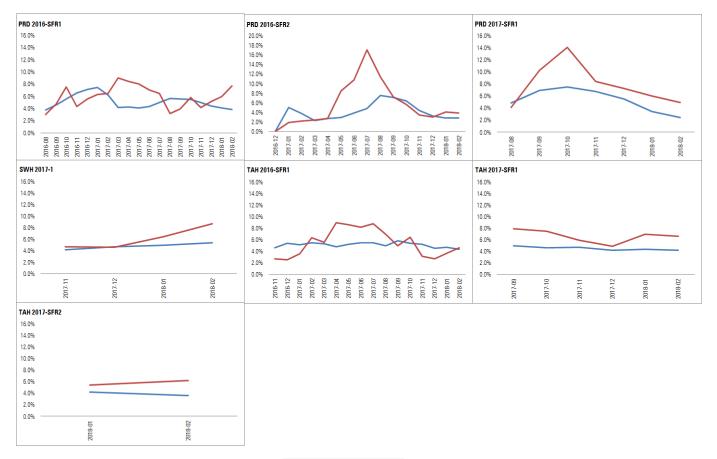


Appendix I – Vacancy Versus Lease Expiration













Appendix II - Description of Analysis

Morningstar tracks key metrics to gauge the performance of single-borrower, single-family rental transactions that 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, 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, Morningstar takes the respective balance divided by the current deal balance.

Table 2 – Multiborrower Loan Performance by Loan Count

Morningstar shows the total loan count in a securitization and the number of loans 30-59, 60-89, over 90 days, 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, Morningstar isolated the leases starting in a given period and compared the contractual rent in that period with the prior occupied contractual rent. Morningstar then compared this rent change with the year-over-year change in three- and four-bedroom median rents from RentRange. Morningstar weighted the RentRange median rents by geography to match the MSA concentration of the Morningstar single-family rental database.

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

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, Morningstar used the logic outlined in the Tables 5a, 5b, and 5c – Lease Expiration section. 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, 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 – February 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 February contractual rents in the Morningstar single-family rental database and compares these rents with their property-specific rent estimates from RentRange.

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 Morningstar's database. MSAs in red are below the overall average rent change for the month, while those in blue are above.

Table 3 – Blended Rent Change (by Percentage) – Top MSAs

Table 3 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 4a, 4b, and 4c – Month-End Vacancy

Table 4a displays deal-level vacancy by the month-end count of empty properties. Table 4b shows the deal-level vacancy as a percentage of the total properties in each pool. Table 4c 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 5a, 5b, and 5c 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 5a, 5b, and 5c – Lease Expiration

Because lease expiration profiles change over time as tenants renew or new tenants occupy vacant properties, 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 February lease expirations, Morningstar looks for all February lease expirations in the November property tape. 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 Morningstar is looking three months back to determine its sample, there are instances when tenants vacate properties between the time Morningstar determines its sample and the month in which the tenant must make a decision to stay in the property. Morningstar excludes those vacated properties from its lease expiration sample and its retention rate calculation in Table 9. In the current example, properties that become vacant or that have move out dates in either December or January are removed from the February lease expiration count.

Tables 6a and 6b – Historical Months of Vacancy

Tables 6a and 6b show the number of months of vacancy the February unoccupied properties have experienced. In other words, if a property is unoccupied as of the February 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 6a shows historical months of vacancy by count, and Table 6b is as a percentage of the February vacancies.

Table 7 – Delinguency Definition

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 7 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 March 1 considered as delinquent after 30 days or as delinquent on April 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 8a and 8b – Month-End Delinquency

Table 8a shows the month-end count of delinquencies based on the definition in Table 7, and Table 8b 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 7.

Table 9 – Monthly Retention Rate of Expiring Leases

When evaluating an issuer's ability to keep tenants in a property, Morningstar considers a retention rate. Once again, differences in monthly reporting affect the calculation that 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, 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 5a 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, Morningstar relies on the cutoff tape lease expiration profile. As a result, the first three months of retention rate reported in Table 9 will use the cutoff tape to find the sample of lease expirations. After isolating the applicable lease expiration sample, Morningstar looks at the most recent property tape to determine the lease status of the properties. In this report, Morningstar uses the February property tape to determine the lease status for January expirations. 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 10 – Monthly Retention Rate of MTM Leases

In Table 10, 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, 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 January 2017 retention rates are the February statuses of January MTM tenants.

Tables 11a and 11b - MTM Tenants

In Tables 11a and 11b, 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 12 - Monthly Turnover Rate

In evaluating how effective an issuer is at retaining tenants, Morningstar considers the monthly turnover rate. For this metric, Morningstar strives to apply a consistent calculation given the differences in issuers' reporting. 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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