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Single-Family Rental Research

Performance Summary Covering All Morningstar-Rated Securitizations

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Introduction

After seven consecutive months of percentage increases, lease expirations across single-borrower, single-family rental securitizations rated by Morningstar Credit Ratings, LLC have declined from a 2017 high of 9.0% in July to 6.2% in September. The average vacancy increased slightly to 5.9% from a revised 5.8% the month prior. The leveling off in vacancy may be attributable to the decline in lease expirations. While the average retention rate decreased slightly month-over-month, it remained strong in the mid-70s. Among the top 20 metropolitan statistical areas, the Houston MSA had the highest vacancy rate at 9.8% and the Sarasota-Bradenton-Venice, Florida MSA followed at 7.7%. Houston's rent change, at -0.8%, was the only negative rent change among the top 20 MSAs. At this time, it is too early to attribute any changes in local rental markets to hurricanes Harvey and Irma. The TAH 2017-SFR1 closed and the TAH 2015-SFR1 transaction paid off in October, keeping the performance summary at an analysis of 25 single-borrower deals and over 91,000 properties.

Morningstar publishes its performance summary to provide market participants detailed property-level information on each securitization. The data below summarizes issuer-reported property-level information through September. Page 4 includes a summary of the seven multiborrower transactions. For deals seasoned at least one year, we provide Morningstar DealView® Surveillance Analysis reports, available on our website, www.morningstarcreditratings.com.

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Single-Borrower Performance

The average vacancy rate increased slightly to 5.9% in September, but the decline in expiring leases could indicate a corresponding decline in the average vacancy rate soon. The average retention rate on full-term leases dropped slightly to 74.8% in August, the latest month available, but the rate remains strong. Six single-borrower, single-family rental securitization posted a retention rate below 70.0%, and only four deals had retention rates at or above 80.0%. The overall turnover rate remained constant at 3.9% as of the most recent data available.

The average delinquency rate ticked up slightly to 0.8%, and nine deals had delinquency rates at or above 1.0%, up from four the month prior. CSH 2016-2 and HPA 2016-2 saw the largest month-over-month increases of 0.5% and AMSR 2016-SFR1 has the highest delinquency rate at 1.5%. Any review of delinquency should be viewed within the context of the delinquency definitions in Table 5.

Rents rose 3.5% in September. Chart 1 shows that the rent gains for securitized properties were higher than 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 August, the latest month for which data is available, the rent change for vacant-to-occupied properties was 1.5%, while the rent change for renewal properties was at 4.4%. Chart 3 shows that the average contractual rents by MSA have been largely in line with or slightly higher than their property-level RentRange estimates. Minor exceptions are most notable in the Florida MSA of Sarasota-Bradenton-Venice. Chart 4 shows the MSA-level blended rent change. MSAs with rent changes above the 3.5% 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 1 shows the MSA-level blended rent change for the past 12 months.

Multiborrower Performance

There have been seven multiborrower transactions: B2R 2015-1, B2R 2015-2, B2R 2016-1, FKL 2015-SFR1, CAF 2015-1, CAF 2016-1, and CAF 2016-2. As of the most recent remittance report, B2R 2015-1 had two loans that were 30 days delinquent and two loans that were at least 90 days delinquent. One of the loans at least 90 days delinquent is 0.2% of the transaction balance and was transferred to special servicing in June 2016 for payment default. The other at least 90 days past due loan in B2R 2015-1 makes up 0.3% of the deal balance and is in foreclosure. This loan entered bankruptcy in August 2016 and remains in special servicing. In all,

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five loans from B2R 2015-1, totaling 1.1% of the transaction balance, have been transferred to special servicing. Separately, five loans in B2R 2015-2 were 30 days delinquent, one loan was 60 days delinquent, and three were more than 90 days delinquent. One of the 90 or more days delinquent loans totaling 0.2% of the transaction balance is also in foreclosure. The borrower of this loan filed for bankruptcy in August. In all, four loans in B2R 2015-2 were transferred to special servicing and account for 0.7% of the deal balance. B2R 2016-1 had two loans that were 30 days past due, two that were 60 days delinquent, and three that were more than 90 days delinquent. The past-due loans in B2R 2016-1 comprise 1.9% of the deal balance. Four loans in B2R 2016-1 have been transferred to special servicing. CAF 2015-1 had one loan that was at least 90 days delinquent that was transferred to special servicing in June. In total, three loans equaling 6.0% of the transaction balance have been transferred to special servicing. CAF 2016-1 had one loan that was 30 days delinquent and one loan that was 60 days delinquent. The 60 days delinquent loan totals 1.1% of the transaction balance and was transferred to special servicing in September for being past due. CAF 2016-2 had one loan 60 days delinquent and three loans at least 90 days delinquent and in special servicing. All of the 90 days delinquent loans are in special servicing from CAF 2016-2, which make up 3.3% of the deal balance. Finally, all borrowers in FKL 2015-SFR1 are current. However, one loan that is approximately 1.8% of the deal balance was transferred to special servicing in October 2016 for imminent default.

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Single-Borrower Charts and Tables

Chart 1 – Single-Family Rental Rent Change Versus RentRange Year-Over-Year Rent Change
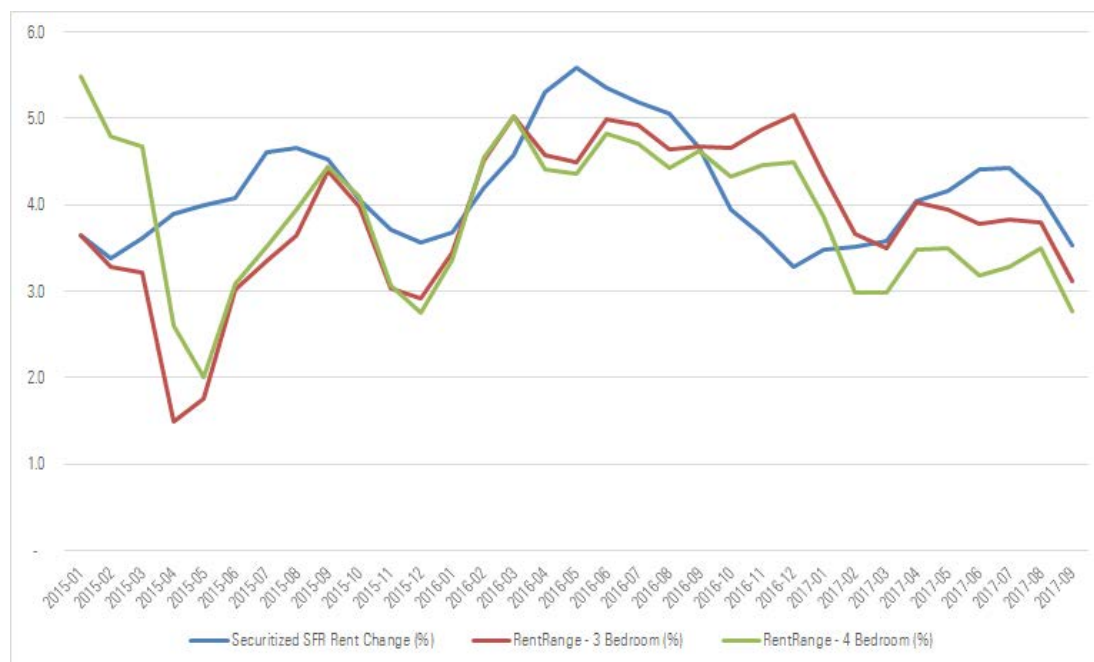
Sources: Morningstar Credit Ratings, LLC; RentRange

Chart 2 – Rental Changes for Renewals Versus Vacant-to-Occupied Properties
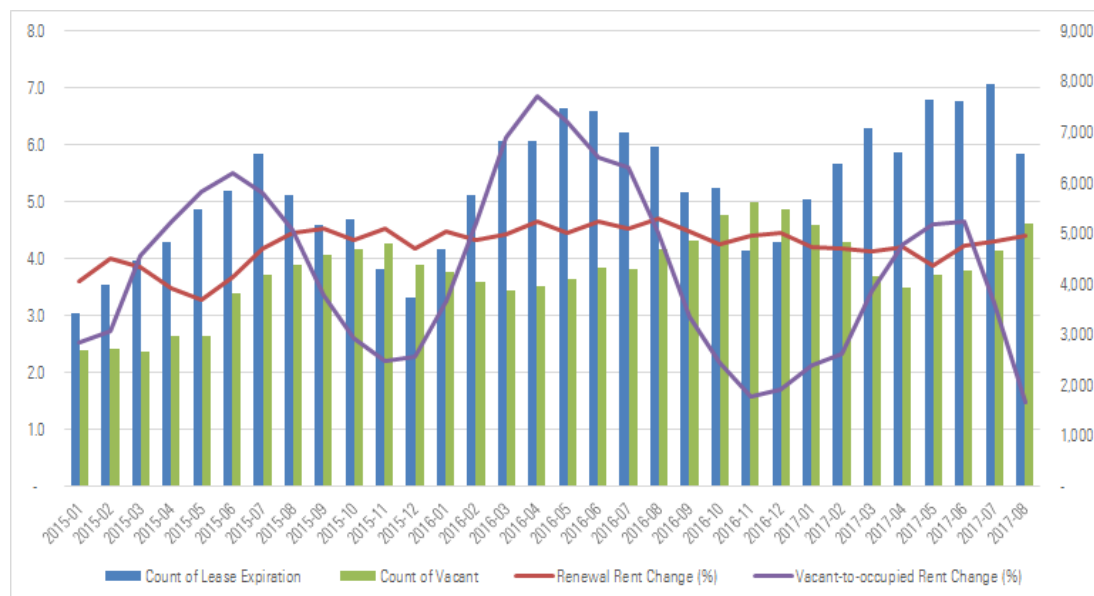
Source: Morningstar Credit Ratings, LLC

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Chart 3 – September Average Contractual Rent Versus Property-Level RentRange Estimate by MSA
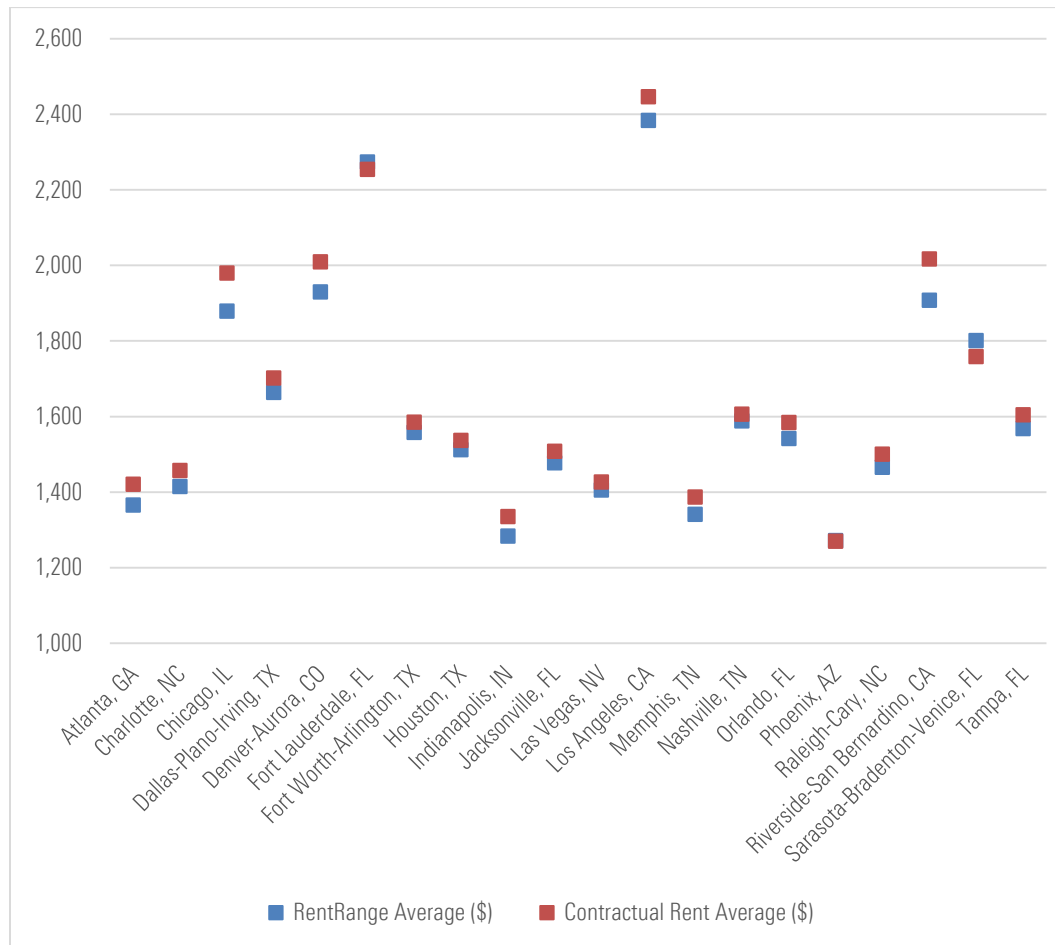
Sources: Morningstar Credit Ratings, LLC; RentRange
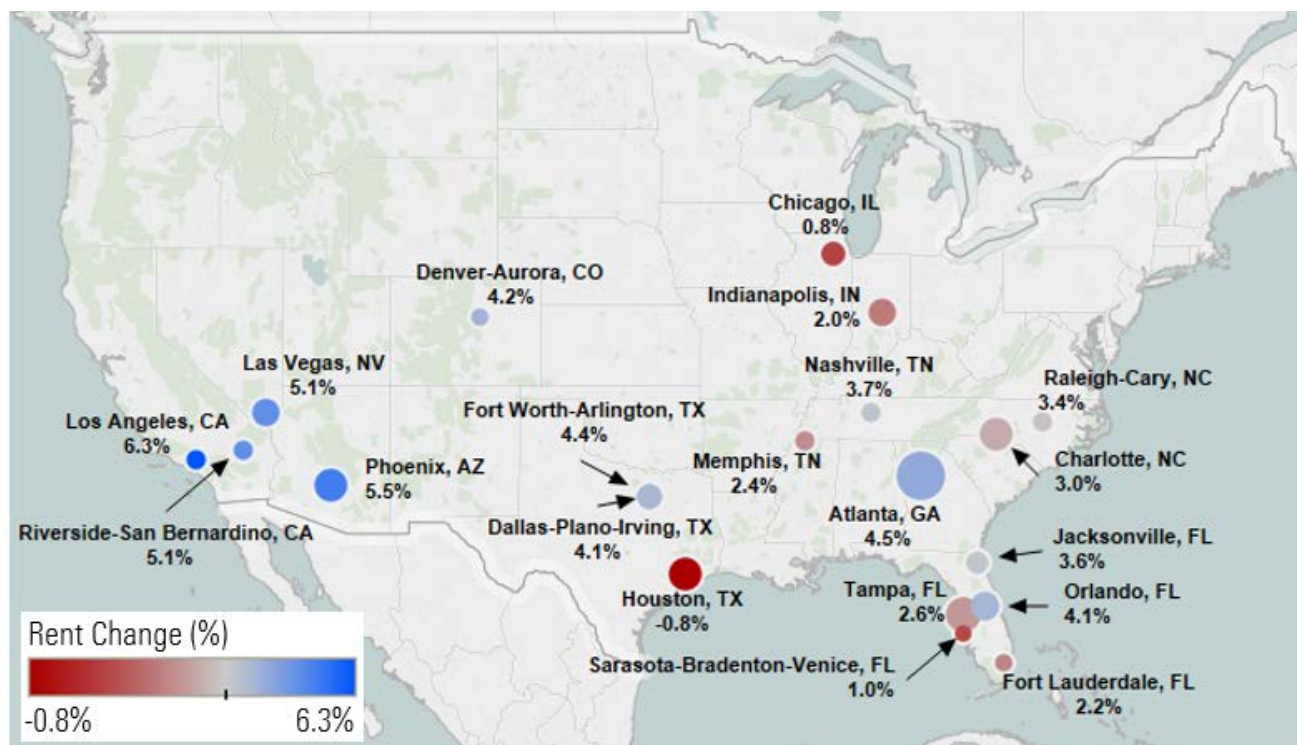
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Chart 4 – MSA-Level Blended Rent Change*

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 1.5% to 12.9%. Because of their proximity, the Fort Worth-Arlington, Texas, MSA is hidden behind the Dallas-Plano-Irving, Texas, MSA.

Table 1 – Blended Rent Change (by Percentage) - Top MSAs

		Year 2016			Year 2017								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Atlanta, GA		4.4	4.3	3.7	3.8	3.9	3.9	4.5	4.6	5.0	4.9	4.6	4.5
Charlotte, NC		4.0	3.4	3.2	2.2	2.7	2.9	4.1	4.1	4.3	4.1	3.2	3.0
Chicago, IL		1.8	0.4	0.4	0.8	1.4	1.9	1.7	2.7	2.7	2.2	2.1	0.8
Dallas-Plano-Irving, TX		4.0	3.7	2.9	2.7	3.6	3.8	4.4	4.9	5.2	5.2	4.3	4.1
Denver-Aurora, CO		6.2	6.5	4.1	6.3	5.4	6.3	6.7	5.9	7.0	6.2	6.2	4.2
Fort Lauderdale, FL		3.7	3.3	2.6	3.6	2.8	2.8	3.9	3.6	2.4	2.5	1.8	2.2
Fort Worth-Arlington, TX		3.8	3.9	3.0	3.4	3.8	4.1	4.5	4.3	4.7	4.6	4.5	4.4
Houston, TX		-0.2	-0.3	-0.1	0.7	-0.1	0.5	1.9	1.7	1.1	1.5	1.6	-0.8
Indianapolis, IN		1.8	-0.2	-1.0	-2.8	0.4	0.7	1.6	2.4	3.4	3.0	3.1	2.0
Jacksonville, FL		3.0	2.2	1.9	1.5	2.0	1.7	2.2	2.9	3.6	4.3	3.5	3.6
Las Vegas, NV		4.8	4.4	4.2	4.4	4.4	4.6	4.8	5.4	5.6	5.4	5.9	5.1
Los Angeles, CA		6.3	7.0	7.0	6.1	8.2	7.1	7.3	7.2	8.2	8.0	7.5	6.3
Memphis, TN		3.0	3.2	2.2	1.9	0.5	0.2	0.5	0.8	2.1	2.3	2.7	2.4
Nashville, TN		4.0	3.9	3.0	3.0	2.4	2.5	4.1	4.0	4.9	4.8	4.0	3.7
Orlando, FL		4.4	3.9	3.7	4.1	4.1	4.1	4.8	4.9	4.9	5.2	4.7	4.1
Phoenix, AZ		5.8	5.5	5.2	5.9	6.1	5.7	6.4	6.6	6.4	6.8	6.2	5.5
Raleigh-Cary, NC		2.4	2.9	2.5	2.0	3.0	3.1	4.2	3.5	3.7	3.7	3.3	3.4
Riverside-San Bernardino, CA		4.5	4.5	5.1	4.6	5.1	4.8	5.0	5.5	5.5	5.9	5.2	5.1
Sarasota-Bradenton-Venice, FL		3.7	3.8	2.0	2.9	1.8	2.3	2.3	2.7	2.9	2.1	1.4	1.0
Tampa, FL		3.2	3.6	3.5	2.9	2.7	2.7	3.4	3.1	3.7	3.6	3.2	2.6

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Table 2a – Month-End Vacancy (by Count)

		Year 2016			Year 2017									Total Count
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
AH4R 2014-SFR2		191	201	179	162	193	164	165	194	209	209	230	251	4,482
AH4R 2014-SFR3		259	248	215	206	236	223	219	194	223	234	310	298	4,499
AH4R 2015-SFR1		260	268	264	258	239	198	183	175	197	198	243	282	4,659
AH4R 2015-SFR2		150	167	156	182	198	195	226	232	256	267	253	269	4,124
AMSR 2016-SFR1		335	345	306	291	288	251	230	237	297	355	335	350	4,262
CAH 2014-1		178	193	182	155	125	125	140	180	216	210	207	202	3,255
CAH 2014-2		178	185	171	160	152	152	164	190	220	194	200	199	3,616
CAH 2015-1		210	195	194	184	164	160	194	224	249	239	261	225	3,811
CSH 2016-1		169	190	180	161	153	155	183	176	176	194	215	207	3,562
CSH 2016-2				177	193	168	173	186	184	189	241	266	241	3,993
HPA 2016-1		93	79	65	59	52	46	48	53	62	75	91	120	2,023
HPA 2016-2		14	17	18	22	20	29	37	48	62	80	63	48	1,340
HPA 2017-1											19	26	36	1,377
IH 2014-SFR2		197	184	158	155	158	138	147	145	158	187	196	180	3,611
IH 2014-SFR3		192	197	180	192	174	168	163	169	170	205	202	201	3,906
IH 2015-SFR1		144	146	142	151	153	124	118	104	103	128	142	146	2,998
IH 2015-SFR2		176	213	186	183	155	145	138	161	157	171	187	164	3,505
IH 2015-SFR3		375	397	384	389	346	315	298	270	287	315	317	363	6,973
PRD 2015-SFR2		194	234	274	255	201	140	139	155	132	130	149	180	3,292
PRD 2015-SFR3		259	226	206	191	149	86	93	133	190	222	269	259	3,153
PRD 2016-SFR1		310	364	397	414	346	232	238	229	239	279	314	311	5,558
PRD 2016-SFR2				195	186	140	84	101	108	144	181	282	265	3,744
PRD 2017-SFR1												131	187	2,712
TAH 2016-SFR1			157	184	175	188	183	164	178	188	187	169	199	3,439
TAH 2017-SFR1													173	3,480
Overall SFR		3,884	4,206	4,413	4,324	3,998	3,486	3,574	3,739	4,124	4,520	5,058	5,356	91,374

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Table 2b – Month-End Vacancy (by Percentage)

		Year 2016			Year 2017								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
AH4R 2014-SFR2		4.3	4.5	4.0	3.6	4.3	3.7	3.7	4.3	4.7	4.7	5.1	5.6
AH4R 2014-SFR3		5.8	5.5	4.8	4.6	5.2	5.0	4.9	4.3	5.0	5.2	6.9	6.6
AH4R 2015-SFR1		5.6	5.8	5.7	5.5	5.1	4.2	3.9	3.8	4.2	4.2	5.2	6.1
AH4R 2015-SFR2		3.6	4.0	3.8	4.4	4.8	4.7	5.5	5.6	6.2	6.5	6.1	6.5
AMSR 2016-SFR1		7.9	8.1	7.2	6.8	6.8	5.9	5.4	5.6	7.0	8.3	7.9	8.2
CAH 2014-1		5.3	5.8	5.4	4.6	3.7	3.7	4.2	5.4	6.5	6.4	6.3	6.2
CAH 2014-2		4.8	5.0	4.6	4.3	4.1	4.1	4.5	5.2	6.0	5.4	5.5	5.5
CAH 2015-1		5.4	5.0	5.0	4.8	4.2	4.1	5.0	5.8	6.5	6.2	6.8	5.9
CSH 2016-1		4.7	5.3	5.1	4.5	4.3	4.4	5.1	4.9	4.9	5.4	6.0	5.8
CSH 2016-2				4.4	4.8	4.2	4.3	4.7	4.6	4.7	6.0	6.7	6.0
HPA 2016-1		4.4	3.7	3.1	2.8	2.5	2.2	2.3	2.6	3.0	3.7	4.5	5.9
HPA 2016-2		1.0	1.2	1.3	1.6	1.4	2.1	2.7	3.5	4.6	6.0	4.7	3.6
HPA 2017-1											1.4	1.9	2.6
IH 2014-SFR2		5.3	5.0	4.3	4.2	4.3	3.8	4.0	4.0	4.4	5.2	5.4	5.0
IH 2014-SFR3		4.8	4.9	4.5	4.8	4.4	4.3	4.1	4.3	4.3	5.2	5.2	5.1
IH 2015-SFR1		4.8	4.8	4.7	5.0	5.1	4.1	3.9	3.4	3.4	4.3	4.7	4.9
IH 2015-SFR2		5.0	6.1	5.3	5.2	4.4	4.1	3.9	4.6	4.5	4.9	5.3	4.7
IH 2015-SFR3		5.2	5.5	5.3	5.4	4.8	4.4	4.2	3.8	4.1	4.5	4.5	5.2
PRD 2015-SFR2		5.9	7.1	8.3	7.7	6.1	4.2	4.2	4.7	4.0	3.9	4.5	5.5
PRD 2015-SFR3		8.2	7.1	6.5	6.0	4.7	2.7	2.9	4.2	6.0	7.0	8.5	8.2
PRD 2016-SFR1		5.6	6.5	7.1	7.4	6.2	4.2	4.3	4.1	4.3	5.0	5.6	5.6
PRD 2016-SFR2				5.2	5.0	3.7	2.2	2.7	2.9	3.8	4.8	7.5	7.1
PRD 2017-SFR1												4.8	6.9
TAH 2016-SFR1			4.6	5.4	5.1	5.5	5.3	4.8	5.2	5.5	5.4	4.9	5.8
TAH 2017-SFR1													5.0
Overall SFR		5.3	5.5	5.2	5.1	4.7	4.1	4.2	4.4	4.9	5.3	5.8	5.9

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Table 2c – Month-End Vacancy (by Percentage) – Top MSAs

		Year 2016			Year 2017								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Atlanta, GA		4.8	4.8	4.6	5.1	4.5	4.1	4.1	5.6	5.1	4.4	4.9	4.8
Charlotte, NC		5.5	6.0	5.6	5.2	4.6	3.7	4.2	4.4	4.4	5.2	5.8	6.6
Chicago, IL		6.4	5.5	5.4	4.7	4.5	4.3	4.3	4.0	4.5	4.8	5.0	5.0
Dallas-Plano-Irving, TX		5.4	5.3	4.4	4.2	3.9	3.5	4.0	5.1	4.8	5.0	5.6	5.5
Denver-Aurora, CO		4.4	6.8	5.7	5.4	4.2	5.3	5.2	4.4	4.5	5.8	6.5	5.4
Fort Lauderdale, FL		6.9	6.6	6.0	6.6	6.7	5.8	6.7	5.9	6.0	6.3	6.3	6.7
Fort Worth-Arlington, TX		4.0	4.6	5.0	5.1	4.5	4.1	3.7	4.8	5.5	5.2	5.0	4.8
Houston, TX		8.0	7.7	7.1	6.2	6.2	6.0	5.8	6.2	6.9	7.9	9.2	9.8
Indianapolis, IN		8.7	8.1	6.8	6.2	5.2	4.3	4.8	4.1	5.1	6.3	6.7	6.7
Jacksonville, FL		6.9	7.3	7.6	6.6	4.8	3.5	4.1	4.1	3.7	4.4	5.1	6.5
Las Vegas, NV		4.1	3.7	4.3	3.4	3.3	3.0	4.1	3.6	4.3	4.3	4.4	4.5
Los Angeles, CA		3.2	3.0	2.9	2.4	2.7	3.2	3.9	4.4	5.1	5.1	4.6	4.7
Memphis, TN		8.3	8.7	8.8	8.1	7.8	5.0	4.1	4.5	5.5	6.3	6.7	7.3
Nashville, TN		4.8	5.8	5.5	5.5	5.9	4.3	3.6	4.1	5.3	6.2	7.1	7.1
Orlando, FL		4.7	5.0	4.5	4.0	3.8	3.3	3.4	3.8	3.9	4.5	4.8	4.8
Phoenix, AZ		4.4	4.6	4.2	3.6	3.0	2.9	3.3	3.6	4.4	5.2	5.5	4.6
Raleigh-Cary, NC		4.6	4.8	5.0	5.1	5.8	4.6	5.2	5.1	5.5	4.9	6.1	7.1
Riverside-San Bernardino, CA		3.8	4.0	3.6	4.0	4.5	4.3	4.3	3.3	4.2	3.3	3.6	3.4
Sarasota-Bradenton-Venice, FL		7.2	7.2	6.6	7.4	6.1	5.1	6.6	7.1	6.7	7.0	7.7	7.7
Tampa, FL		5.1	5.0	5.2	5.3	4.4	4.0	4.1	3.9	4.2	5.1	6.3	6.7
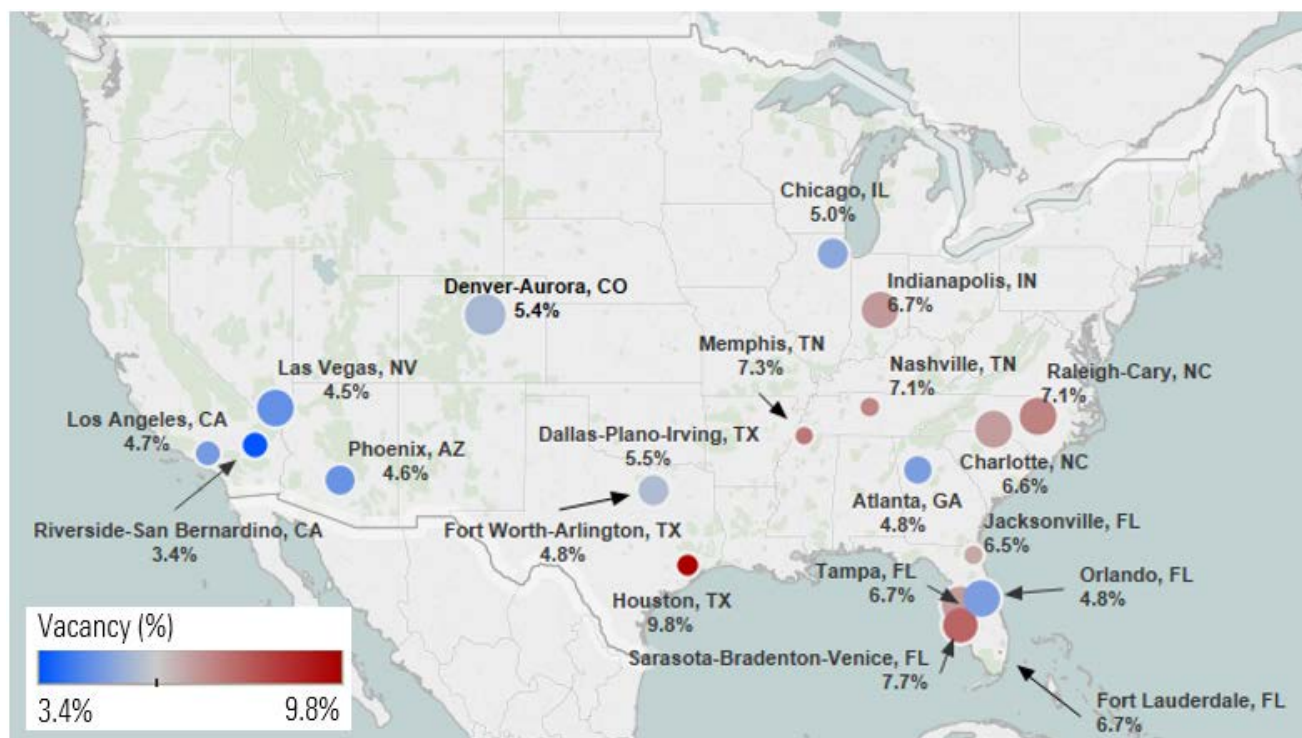
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Chart 5 – MSA-Level Vacancy and Lease Expiration Percentage (by Count)*

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 19.0% to 25.4%. Because of their proximity, the Fort Worth-Arlington, Texas, MSA is hidden behind Dallas-Plano-Irving, Texas, MSA.

Table 3a – Lease Expiration (by Count)

		Year 2016		Year 2017										Total Count
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
AH4R 2014-SFR2		190	195	150	290	334	362	387	518	399	371	331	264	4,482
AH4R 2014-SFR3		216	146	169	295	287	306	273	398	474	448	416	265	4,499
AH4R 2015-SFR1		341	293	266	319	272	242	215	249	382	488	423	336	4,659
AH4R 2015-SFR2		116	122	124	245	355	466	407	516	464	355	214	159	4,124
AMSR 2016-SFR1		217	174	156	200	294	314	355	382	439	281	225	186	4,262
CAH 2014-1		290	210	154	175	189	190	214	216	269	338	342	307	3,255
CAH 2014-2		245	221	222	269	286	322	328	303	263	273	243	255	3,616
CAH 2015-1		286	241	210	220	178	200	268	294	368	393	378	298	3,811
CSH 2016-1		230	182	184	174	253	294	331	282	337	340	273	264	3,562
CSH 2016-2				217	242	266	308	324	389	335	300	287	230	3,993
HPA 2016-1		141	62	48	64	71	116	165	168	221	249	228	212	2,023
HPA 2016-2		8	10	5	6	2	139	212	276	386	179	11	5	1,340
HPA 2017-1											87	141	120	1,377
IH 2014-SFR2		203	154	153	191	187	222	258	297	318	322	267	213	3,611
IH 2014-SFR3		184	203	171	213	214	241	262	302	331	369	298	204	3,906
IH 2015-SFR1		200	207	196	255	213	192	166	138	164	209	191	162	2,998
IH 2015-SFR2		247	270	219	221	247	258	192	184	199	232	227	211	3,505
IH 2015-SFR3		532	480	445	522	530	520	395	368	405	446	499	388	6,973
PRD 2015-SFR2		304	165	149	179	217	266	215	391	186	192	118	179	3,292
PRD 2015-SFR3		74	27	27	42	55	68	164	345	353	525	284	216	3,153
PRD 2016-SFR1		420	242	312	353	358	502	470	448	394	358	176	216	5,558
PRD 2016-SFR2				115	70	79	87	101	318	402	639	426	270	3,744
PRD 2017-SFR1												112	279	2,712
TAH 2016-SFR1			93	85	122	218	190	309	296	280	301	238	171	3,439
TAH 2017-SFR1													276	3,480
Overall SFR		4,444	3,697	3,777	4,667	5,105	5,805	6,011	7,078	7,369	7,695	6,348	5,686	91,374

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Table 3b – Lease Expiration (by Percentage)

		Year 2016			Year 2017								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
AH4R 2014-SFR2		4.2	4.3	3.3	6.5	7.4	8.1	8.6	11.6	8.9	8.3	7.4	5.9
AH4R 2014-SFR3		4.8	3.2	3.8	6.6	6.4	6.8	6.1	8.8	10.5	10.0	9.2	5.9
AH4R 2015-SFR1		7.3	6.3	5.7	6.8	5.8	5.2	4.6	5.3	8.2	10.5	9.1	7.2
AH4R 2015-SFR2		2.8	3.0	3.0	5.9	8.6	11.3	9.9	12.5	11.3	8.6	5.2	3.9
AMSR 2016-SFR1		5.1	4.1	3.7	4.7	6.9	7.4	8.3	9.0	10.3	6.6	5.3	4.4
CAH 2014-1		8.6	6.3	4.6	5.2	5.7	5.7	6.4	6.5	8.1	10.3	10.5	9.4
CAH 2014-2		6.6	6.0	6.0	7.3	7.8	8.8	8.9	8.3	7.2	7.5	6.7	7.1
CAH 2015-1		7.4	6.2	5.4	5.7	4.6	5.2	6.9	7.6	9.6	10.3	9.9	7.8
CSH 2016-1		6.5	5.1	5.2	4.9	7.1	8.3	9.3	7.9	9.5	9.5	7.7	7.4
CSH 2016-2				5.4	6.1	6.7	7.7	8.1	9.7	8.4	7.5	7.2	5.8
HPA 2016-1		6.7	2.9	2.3	3.1	3.4	5.6	8.0	8.2	10.8	12.2	11.2	10.5
HPA 2016-2		0.6	0.7	0.4	0.4	0.1	10.0	15.5	20.2	28.6	13.3	0.8	0.4
HPA 2017-1											6.3	10.2	8.7
IH 2014-SFR2		5.5	4.2	4.2	5.2	5.1	6.1	7.1	8.2	8.8	8.9	7.4	5.9
IH 2014-SFR3		4.6	5.1	4.3	5.3	5.4	6.1	6.6	7.7	8.5	9.4	7.6	5.2
IH 2015-SFR1		6.6	6.9	6.5	8.4	7.1	6.4	5.5	4.6	5.5	7.0	6.4	5.4
IH 2015-SFR2		7.0	7.7	6.2	6.3	7.0	7.3	5.5	5.2	5.7	6.6	6.5	6.0
IH 2015-SFR3		7.4	6.7	6.2	7.3	7.4	7.3	5.5	5.1	5.8	6.4	7.2	5.6
PRD 2015-SFR2		9.2	5.0	4.5	5.4	6.6	8.1	6.5	11.9	5.6	5.8	3.6	5.4
PRD 2015-SFR3		2.3	0.9	0.9	1.3	1.7	2.2	5.2	10.9	11.2	16.6	9.0	6.9
PRD 2016-SFR1		7.5	4.3	5.6	6.3	6.4	9.0	8.4	8.0	7.1	6.4	3.2	3.9
PRD 2016-SFR2				3.1	1.9	2.1	2.3	2.7	8.5	10.7	17.1	11.4	7.2
PRD 2017-SFR1												4.1	10.3
TAH 2016-SFR1			2.7	2.5	3.5	6.3	5.5	9.0	8.6	8.1	8.8	6.9	5.0
TAH 2017-SFR1													7.9
Overall SFR		6.0	4.8	4.5	5.5	6.0	6.9	7.1	8.4	8.8	9.0	7.2	6.2

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Table 3c – Lease Expiration (by Percentage) – Top MSAs

		Year 2016			Year 2017								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Atlanta, GA		5.9	4.5	5.0	5.5	5.9	6.8	7.2	8.4	8.9	8.8	6.7	6.3
Charlotte, NC		6.0	4.9	4.0	4.6	4.8	6.0	6.9	7.7	8.5	9.2	7.7	7.4
Chicago, IL		4.9	3.4	3.3	5.6	6.2	7.5	7.6	9.3	8.3	9.1	7.4	5.9
Dallas-Plano-Irving, TX		6.9	4.0	4.6	5.1	5.7	6.9	7.2	9.0	10.4	9.7	7.0	5.8
Denver-Aurora, CO		4.4	5.5	3.4	4.7	5.0	7.6	9.8	7.7	10.0	10.0	8.3	7.2
Fort Lauderdale, FL		5.7	4.8	4.6	7.9	6.4	8.8	8.5	6.6	7.7	6.8	6.0	6.2
Fort Worth-Arlington, TX		5.2	3.7	3.7	4.7	5.2	7.6	8.0	9.6	11.5	8.7	6.5	6.0
Houston, TX		5.0	3.6	4.4	4.2	6.4	6.5	6.9	7.6	8.6	9.1	6.1	5.5
Indianapolis, IN		3.5	1.4	1.1	4.9	4.5	6.3	9.1	10.5	9.6	11.6	7.4	5.1
Jacksonville, FL		6.5	6.3	5.0	5.7	5.9	6.3	5.9	8.0	7.0	9.2	5.6	5.6
Las Vegas, NV		7.8	4.2	4.9	5.7	6.3	6.5	7.8	8.4	9.4	9.9	7.7	6.4
Los Angeles, CA		4.1	4.4	4.1	4.9	5.0	7.1	7.9	6.9	7.3	7.1	7.3	6.8
Memphis, TN		5.4	3.3	4.2	4.7	5.2	7.0	6.3	11.0	8.7	8.5	6.4	5.4
Nashville, TN		6.6	5.7	4.2	4.7	5.3	7.2	7.9	9.8	10.3	8.5	6.4	5.4
Orlando, FL		6.1	4.4	4.7	5.0	6.0	6.5	6.9	9.8	9.1	9.8	8.0	6.4
Phoenix, AZ		6.4	4.8	5.2	6.4	6.9	7.1	5.8	7.8	7.5	8.9	7.4	5.9
Raleigh-Cary, NC		6.4	4.2	3.6	4.4	7.1	6.5	6.1	10.7	9.8	10.0	7.7	6.8
Riverside-San Bernardino, CA		6.3	5.7	4.9	6.0	6.4	7.9	6.7	6.7	6.9	7.5	7.0	6.8
Sarasota-Bradenton-Venice, FL		6.4	4.9	4.6	5.2	5.0	7.4	6.5	6.6	7.8	8.7	7.7	7.2
Tampa, FL		6.2	4.7	5.3	5.3	5.9	6.2	7.1	7.8	8.4	9.8	7.8	6.7

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Table 4a – Historical Months of Vacancy for June Vacancies (by Count)

		1	2	3	4	5	6	7	8	9	10	11	12+	Total
AH4R 2014-SFR2		42	52	64	37	25	14	9	5	3	0	0	0	251
AH4R 2014-SFR3		56	76	62	46	24	11	17	4	1	0	0	1	298
AH4R 2015-SFR1		59	81	54	28	26	13	12	6	1	0	1	1	282
AH4R 2015-SFR2		62	72	55	43	20	9	5	1	2	0	0	0	269
AMSR 2016-SFR1		84	66	93	59	24	14	5	4	1	0	0	0	350
CAH 2014-1		31	45	44	28	19	13	3	7	2	4	3	3	202
CAH 2014-2		32	38	38	32	20	22	6	6	1	1	0	3	199
CAH 2015-1		36	70	56	29	21	6	2	1	0	1	1	2	225
CSH 2016-1		73	63	37	11	6	4	6	2	1	0	0	4	207
CSH 2016-2		100	82	37	14	5	0	1	0	0	2	0		241
HPA 2016-1		44	41	23	5	4	2	1	0	0	0	0	0	120
HPA 2016-2		12	5	22	6	2	0	0	0	0	0	0	1	48
HPA 2017-1		23	10	3	0									36
IH 2014-SFR2		24	53	41	26	12	9	4	6	2	1	2	0	180
IH 2014-SFR3		37	59	43	31	12	8	4	1	3	0	0	3	201
IH 2015-SFR1		17	37	36	26	19	6	1	1	0	1	0	2	146
IH 2015-SFR2		26	43	39	23	12	11	3	3	0	1	2	1	164
IH 2015-SFR3		83	101	74	48	22	16	10	3	2	0	0	4	363
PRD 2015-SFR2		45	49	40	24	11	4	1	2	3	0	1	0	180
PRD 2015-SFR3		59	89	59	24	11	13	2	2	0	0	0	0	259
PRD 2016-SFR1		111	109	51	12	18	4	3	2	0	0	0	1	311
PRD 2016-SFR2		102	115	38	7	2	1	0	0	0	0	0		265
PRD 2017-SFR1		113	72	2										187
TAH 2016-SFR1		93	51	37	11	1	3		1			2		199
TAH 2017-SFR1		170	3											173
Overall SFR		1,534	1,482	1,048	570	316	183	95	57	22	13	10	26	5,356

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Table 4b – Historical Months of Vacancy for September Vacancies (by Percentage)

		1	2	3	4	5	6	7	8	9	10	11	12+	Total
AH4R 2014-SFR2		16.7	20.7	25.5	14.7	10.0	5.6	3.6	2.0	1.2	0.0	0.0	0.0	100.0
AH4R 2014-SFR3		18.8	25.5	20.8	15.4	8.1	3.7	5.7	1.3	0.3	0.0	0.0	0.3	100.0
AH4R 2015-SFR1		20.9	28.7	19.1	9.9	9.2	4.6	4.3	2.1	0.4	0.0	0.4	0.4	100.0
AH4R 2015-SFR2		23.0	26.8	20.4	16.0	7.4	3.3	1.9	0.4	0.7	0.0	0.0	0.0	100.0
AMSR 2016-SFR1		24.0	18.9	26.6	16.9	6.9	4.0	1.4	1.1	0.3	0.0	0.0	0.0	100.0
CAH 2014-1		15.3	22.3	21.8	13.9	9.4	6.4	1.5	3.5	1.0	2.0	1.5	1.5	100.0
CAH 2014-2		16.1	19.1	19.1	16.1	10.1	11.1	3.0	3.0	0.5	0.5	0.0	1.5	100.0
CAH 2015-1		16.0	31.1	24.9	12.9	9.3	2.7	0.9	0.4	0.0	0.4	0.4	0.9	100.0
CSH 2016-1		35.3	30.4	17.9	5.3	2.9	1.9	2.9	1.0	0.5	0.0	0.0	1.9	100.0
CSH 2016-2		41.5	34.0	15.4	5.8	2.1	0.0	0.4	0.0	0.0	0.8	0.0		100.0
HPA 2016-1		36.7	34.2	19.2	4.2	3.3	1.7	0.8	0.0	0.0	0.0	0.0	0.0	100.0
HPA 2016-2		25.0	10.4	45.8	12.5	4.2	0.0	0.0	0.0	0.0	0.0	0.0	2.1	100.0
HPA 2017-1		63.9	27.8	8.3	0.0									100.0
IH 2014-SFR2		13.3	29.4	22.8	14.4	6.7	5.0	2.2	3.3	1.1	0.6	1.1	0.0	100.0
IH 2014-SFR3		18.4	29.4	21.4	15.4	6.0	4.0	2.0	0.5	1.5	0.0	0.0	1.5	100.0
IH 2015-SFR1		11.6	25.3	24.7	17.8	13.0	4.1	0.7	0.7	0.0	0.7	0.0	1.4	100.0
IH 2015-SFR2		15.9	26.2	23.8	14.0	7.3	6.7	1.8	1.8	0.0	0.6	1.2	0.6	100.0
IH 2015-SFR3		22.9	27.8	20.4	13.2	6.1	4.4	2.8	0.8	0.6	0.0	0.0	1.1	100.0
PRD 2015-SFR2		25.0	27.2	22.2	13.3	6.1	2.2	0.6	1.1	1.7	0.0	0.6	0.0	100.0
PRD 2015-SFR3		22.8	34.4	22.8	9.3	4.2	5.0	0.8	0.8	0.0	0.0	0.0	0.0	100.0
PRD 2016-SFR1		35.7	35.0	16.4	3.9	5.8	1.3	1.0	0.6	0.0	0.0	0.0	0.3	100.0
PRD 2016-SFR2		38.5	43.4	14.3	2.6	0.8	0.4	0.0	0.0	0.0	0.0	0.0		100.0
PRD 2017-SFR1		60.4	38.5	1.1										100.0
TAH 2016-SFR1		46.7	25.6	18.6	5.5	0.5	1.5	0.0	0.5	0.0	1.0	0.0	0.0	100.0
TAH 2017-SFR1		98.3	1.7											100.0
Overall SFR		28.6	27.7	19.6	10.6	5.9	3.4	1.8	1.1	0.4	0.2	0.2	0.5	100.0

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Table 5 – 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	Past due one calendar month or more (not dependent on day count) and owing $200 or more
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.

Table 6a – Month-End Delinquency (by Count)

		Year 2016			Year 2017									Total Count
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
AH4R 2014-SFR2		12	23	27	16	28	21	14	12	10	13	15	9	4,482
AH4R 2014-SFR3		17	18	10	15	15	12	11	8	9	7	11	7	4,499
AH4R 2015-SFR1		15	24	17	16	12	20	12	10	10	12	14	21	4,659
AH4R 2015-SFR2		20	19	18	19	15	12	3	6	7	7	6	10	4,124
AMSR 2016-SFR1		81	99	109	106	94	56	67	78	114	171	78	66	4,262
CAH 2014-1		24	26	23	39	28	17	18	22	15	22	20	28	3,255
CAH 2014-2		41	32	41	44	47	37	27	31	21	26	29	37	3,616
CAH 2015-1		19	23	28	40	27	23	17	17	18	17	22	30	3,811
CSH 2016-1		20	22	32	35	29	22	17	20	15	24	21	29	3,562
CSH 2016-2				43	33	42	40	21	17	30	27	23	43	3,993
HPA 2016-1		22	21	24	19	16	12	12	7	16	9	13	19	2,023
HPA 2016-2		13	10	14	20	20	11	8	6	6	9	12	19	1,340
HPA 2017-1											9	13	17	1,377
IH 2014-SFR2		26	18	24	32	26	26	33	33	39	40	35	39	3,611
IH 2014-SFR3		18	32	32	25	39	36	26	32	23	32	35	26	3,906
IH 2015-SFR1		15	18	25	23	28	25	22	21	36	33	36	29	2,998
IH 2015-SFR2		42	35	37	22	25	33	38	28	33	42	32	45	3,505
IH 2015-SFR3		60	64	65	74	82	63	75	71	80	99	115	89	6,973
PRD 2015-SFR2		31	26	22	19	20	13	18	15	14	19	14	26	3,292
PRD 2015-SFR3		18	17	10	15	17	4	8	9	8	16	19	22	3,153
PRD 2016-SFR1		45	38	44	40	42	24	26	20	24	28	29	27	5,558
PRD 2016-SFR2				26	27	16	11	10	14	18	20	16	24	3,744
PRD 2017-SFR1												14	20	2,712
TAH 2016-SFR1			20	67	68	59	31	29	26	15	9	5	3	3,439
TAH 2017-SFR1													25	3,480
Overall SFR		539	585	738	747	727	549	512	503	561	691	627	710	91,374

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Table 6b – Month-End Delinquency (by Percentage)

		Year 2016		Year 2017									
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
AH4R 2014-SFR2		0.3	0.5	0.6	0.4	0.6	0.5	0.3	0.3	0.2	0.3	0.3	0.2
AH4R 2014-SFR3		0.4	0.4	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
AH4R 2015-SFR1		0.3	0.5	0.4	0.3	0.3	0.4	0.3	0.2	0.2	0.3	0.3	0.5
AH4R 2015-SFR2		0.5	0.5	0.4	0.5	0.4	0.3	0.1	0.1	0.2	0.2	0.1	0.2
AMSR 2016-SFR1		1.9	2.3	2.6	2.5	2.2	1.3	1.6	1.8	2.7	4.0	1.8	1.5
CAH 2014-1		0.7	0.8	0.7	1.2	0.8	0.5	0.5	0.7	0.5	0.7	0.6	0.9
CAH 2014-2		1.1	0.9	1.1	1.2	1.3	1.0	0.7	0.8	0.6	0.7	0.8	1.0
CAH 2015-1		0.5	0.6	0.7	1.0	0.7	0.6	0.4	0.4	0.5	0.4	0.6	0.8
CSH 2016-1		0.6	0.6	0.9	1.0	0.8	0.6	0.5	0.6	0.4	0.7	0.6	0.8
CSH 2016-2				1.1	0.8	1.1	1.0	0.5	0.4	0.8	0.7	0.6	1.1
HPA 2016-1		1.0	1.0	1.1	0.9	0.8	0.6	0.6	0.3	0.8	0.4	0.6	0.9
HPA 2016-2		0.9	0.7	1.0	1.4	1.4	0.8	0.6	0.4	0.4	0.7	0.9	1.4
HPA 2017-1											0.6	0.9	1.2
IH 2014-SFR2		0.7	0.5	0.7	0.9	0.7	0.7	0.9	0.9	1.1	1.1	1.0	1.1
IH 2014-SFR3		0.4	0.8	0.8	0.6	1.0	0.9	0.7	0.8	0.6	0.8	0.9	0.7
IH 2015-SFR1		0.5	0.6	0.8	0.8	0.9	0.8	0.7	0.7	1.2	1.1	1.2	1.0
IH 2015-SFR2		1.2	1.0	1.1	0.6	0.7	0.9	1.1	0.8	0.9	1.2	0.9	1.3
IH 2015-SFR3		0.8	0.9	0.9	1.0	1.1	0.9	1.0	1.0	1.1	1.4	1.6	1.3
PRD 2015-SFR2		0.9	0.8	0.7	0.6	0.6	0.4	0.5	0.5	0.4	0.6	0.4	0.8
PRD 2015-SFR3		0.6	0.5	0.3	0.5	0.5	0.1	0.3	0.3	0.3	0.5	0.6	0.7
PRD 2016-SFR1		0.8	0.7	0.8	0.7	0.8	0.4	0.5	0.4	0.4	0.5	0.5	0.5
PRD 2016-SFR2				0.7	0.7	0.4	0.3	0.3	0.4	0.5	0.5	0.4	0.6
PRD 2017-SFR1												0.5	0.7
TAH 2016-SFR1			0.6	1.9	2.0	1.7	0.9	0.8	0.8	0.4	0.3	0.1	0.1
TAH 2017-SFR1													0.7
Overall SFR		0.7	0.8	0.9	0.9	0.9	0.7	0.6	0.6	0.7	0.8	0.7	0.8

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Table 7 – Monthly Retention Rate of Expiring Leases

		Year 2016		Year 2017									
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
AH4R 2014-SFR2		77.9	80.5	74.7	74.8	78.4	84.8	75.2	74.1	73.2	76.0	73.1	TBD
AH4R 2014-SFR3		79.6	72.6	74.6	78.0	78.7	73.9	83.2	71.1	75.5	71.4	72.6	TBD
AH4R 2015-SFR1		80.4	81.9	77.1	77.4	76.1	75.6	72.1	69.1	73.0	74.8	74.9	TBD
AH4R 2015-SFR2		72.4	69.7	69.4	78.8	74.1	77.9	75.4	73.6	69.2	72.7	67.3	TBD
AMSR 2016-SFR1		72.8	81.6	81.4	79.5	83.0	83.8	82.3	80.1	77.2	83.3	79.6	TBD
CAH 2014-1		77.2	77.6	76.0	80.6	77.2	80.0	79.4	74.5	72.9	71.6	81.9	TBD
CAH 2014-2		78.0	76.9	81.5	80.7	79.7	82.9	82.9	78.5	74.1	80.2	76.5	TBD
CAH 2015-1		79.7	82.2	76.7	80.5	80.3	80.0	76.1	75.2	72.8	76.1	73.5	TBD
CSH 2016-1		76.1	73.1	78.3	85.1	78.3	82.0	78.5	77.7	76.0	76.2	75.5	TBD
CSH 2016-2				76.0	75.2	79.3	75.6	80.2	76.6	75.8	68.0	68.3	TBD
HPA 2016-1		84.4	80.6	70.8	82.8	88.7	78.4	80.0	82.1	78.7	76.7	72.8	TBD
HPA 2016-2		75.0	70.0	100.0	100.0	100.0	88.5	85.8	81.9	76.2	84.4	63.6	TBD
HPA 2017-1											81.6	85.1	TBD
IH 2014-SFR2		75.9	74.0	79.7	78.5	78.1	76.6	74.8	76.8	78.3	73.6	77.9	TBD
IH 2014-SFR3		78.3	78.3	76.0	80.3	73.8	78.0	79.0	78.1	78.9	72.6	74.2	TBD
IH 2015-SFR1		78.5	80.2	77.6	78.4	80.3	82.3	80.7	81.9	76.2	77.0	75.4	TBD
IH 2015-SFR2		73.3	77.4	79.9	78.3	84.6	79.8	77.6	71.2	70.4	73.3	82.8	TBD
IH 2015-SFR3		79.5	75.0	80.4	77.6	81.3	79.4	75.4	78.0	80.2	75.1	78.6	TBD
PRD 2015-SFR2		77.0	77.6	79.2	78.8	77.4	77.8	74.9	77.7	72.0	75.5	70.3	TBD
PRD 2015-SFR3		78.4	70.4	81.5	69.0	72.7	73.5	73.8	73.3	71.4	71.4	66.9	TBD
PRD 2016-SFR1		78.3	76.9	72.8	76.5	77.9	81.9	77.4	81.0	76.6	69.8	65.9	TBD
PRD 2016-SFR2				66.1	75.7	78.5	72.4	77.2	81.1	80.8	75.6	70.4	TBD
PRD 2017-SFR1												69.6	TBD
TAH 2016-SFR1			86.0	80.0	86.9	80.7	78.9	81.2	81.8	77.9	82.7	85.3	TBD
TAH 2017-SFR1													TBD
Overall SFR		77.8	77.7	77.1	78.6	79.0	79.7	78.3	76.9	75.4	75.0	74.8	TBD

TBD – To Be Determined

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Table 8 – Monthly Retention Rate of MTM Leases

		Year 2016		Year 2017									
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
AH4R 2014-SFR2		86.4	86.0	82.6	89.9	86.3	85.9	87.2	81.3	78.5	78.9	80.4	TBD
AH4R 2014-SFR3		82.0	84.1	87.5	83.6	79.6	88.2	83.0	84.3	77.7	78.6	81.9	TBD
AH4R 2015-SFR1		80.7	80.6	80.9	89.5	86.3	82.5	82.5	79.0	80.8	81.4	81.3	TBD
AH4R 2015-SFR2		85.2	76.6	84.5	85.9	84.8	81.4	82.1	77.5	75.9	79.3	81.1	TBD
AMSR 2016-SFR1		91.7	95.3	93.1	96.0	93.6	94.8	96.7	94.7	90.6	94.2	92.4	TBD
CAH 2014-1		79.4	81.5	75.4	84.2	66.1	79.5	83.8	74.4	68.4	63.9	68.6	TBD
CAH 2014-2		77.8	79.5	65.8	88.9	72.9	53.7	84.6	72.9	69.1	58.5	68.4	TBD
CAH 2015-1		69.6	82.6	81.1	77.3	71.1	80.0	61.9	67.5	62.5	77.8	81.1	TBD
CSH 2016-1		72.2	76.7	77.4	76.7	67.9	68.8	76.9	65.9	73.2	66.0	75.6	TBD
CSH 2016-2				69.2	70.5	64.4	72.7	73.0	81.1	62.9	70.2	78.4	TBD
HPA 2016-1												100.0	TBD
HPA 2016-2										100.0	100.0	100.0	TBD
HPA 2017-1													TBD
IH 2014-SFR2		81.4	83.3	90.5	92.9	85.4	85.4	83.9	80.4	81.1	82.1	87.7	TBD
IH 2014-SFR3		76.9	82.0	80.9	91.1	88.0	83.3	79.6	83.7	81.8	82.8	89.1	TBD
IH 2015-SFR1		88.6	81.3	88.9	78.3	81.3	68.5	92.7	77.8	74.5	78.6	80.4	TBD
IH 2015-SFR2		78.7	87.8	81.1	85.4	89.1	86.7	79.1	77.8	85.7	70.7	93.3	TBD
IH 2015-SFR3		84.0	78.0	82.7	83.3	74.4	86.7	78.6	73.9	80.3	83.5	83.5	TBD
PRD 2015-SFR2		79.5	76.3	74.6	80.7	77.8	73.8	83.6	80.3	73.3	72.6	72.7	TBD
PRD 2015-SFR3		73.0	76.3	84.1	92.7	90.9	75.5	82.5	78.3	65.0	75.9	73.7	TBD
PRD 2016-SFR1		80.8	76.4	84.0	80.2	82.1	79.3	79.7	81.5	73.6	79.5	80.0	TBD
PRD 2016-SFR2				78.8	91.1	84.0	82.2	81.4	81.4	74.6	78.3	73.9	TBD
PRD 2017-SFR1												81.3	TBD
TAH 2016-SFR1			92.6	96.9	90.6	92.9	95.3	93.1	92.7	92.7	92.2	91.3	TBD
TAH 2017-SFR1													TBD
Overall SFR		83.3	84.9	85.6	88.0	84.8	85.4	85.9	83.5	80.8	82.8	84.4	TBD

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Table 9a – MTM Tenants (by Count)

		Year 2016			Year 2017									Total Count
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
AH4R 2014-SFR2		187	178	170	140	159	176	216	256	273	251	245	217	4,482
AH4R 2014-SFR3		209	185	164	159	174	174	190	210	222	227	216	199	4,499
AH4R 2015-SFR1		215	202	199	181	206	208	202	202	189	221	229	227	4,659
AH4R 2015-SFR2		142	132	114	111	133	171	186	238	239	215	207	179	4,124
AMSR 2016-SFR1		368	383	402	393	421	433	479	514	576	574	600	605	4,262
CAH 2014-1		68	65	65	57	56	44	37	39	38	36	35	35	3,255
CAH 2014-2		36	39	38	36	48	41	39	48	55	53	38	34	3,616
CAH 2015-1		56	46	53	44	45	45	42	40	40	36	37	40	3,811
CSH 2016-1		36	30	31	30	28	32	39	41	41	47	41	38	3,562
CSH 2016-2				39	44	45	44	37	53	62	47	37	40	3,993
HPA 2016-1		0	0	0	0	0	0	0	0	0	0	1	4	2,023
HPA 2016-2		0	0	0	0	0	0	0	0	1	1	1	1	1,340
HPA 2017-1											0	0	0	1,377
IH 2014-SFR2		56	58	58	57	64	69	83	77	84	74	74	75	3,611
IH 2014-SFR3		70	64	67	69	64	70	70	75	83	93	95	82	3,906
IH 2015-SFR1		67	74	61	76	67	66	64	64	68	67	55	59	2,998
IH 2015-SFR2		76	69	72	61	64	86	90	81	77	79	51	69	3,505
IH 2015-SFR3		156	175	159	164	173	169	162	163	146	149	140	135	6,973
PRD 2015-SFR2		65	79	75	85	94	96	97	119	96	76	71	63	3,292
PRD 2015-SFR3		80	61	50	51	55	60	67	91	96	112	115	110	3,153
PRD 2016-SFR1		113	109	111	142	163	182	203	187	170	151	125	116	5,558
PRD 2016-SFR2				65	58	61	54	58	95	103	122	137	123	3,744
PRD 2017-SFR1												47	62	2,712
TAH 2016-SFR1			237	231	249	258	278	287	298	311	348	371	379	3,439
TAH 2017-SFR1													207	3,480
Overall SFR		2,000	2,186	2,224	2,207	2,378	2,498	2,648	2,891	2,970	2,979	2,968	3,099	91,374

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Table 9b – MTM Tenants (by Percentage)

		Year 2016			Year 2017								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
AH4R 2014-SFR2		4.2	4.0	3.8	3.1	3.5	3.9	4.8	5.7	6.1	5.6	5.5	4.8
AH4R 2014-SFR3		4.6	4.1	3.6	3.5	3.9	3.9	4.2	4.7	4.9	5.0	4.8	4.4
AH4R 2015-SFR1		4.6	4.3	4.3	3.9	4.4	4.5	4.3	4.3	4.1	4.7	4.9	4.9
AH4R 2015-SFR2		3.4	3.2	2.8	2.7	3.2	4.1	4.5	5.8	5.8	5.2	5.0	4.3
AMSR 2016-SFR1		8.6	9.0	9.4	9.2	9.9	10.2	11.2	12.1	13.5	13.5	14.1	14.2
CAH 2014-1		2.0	1.9	1.9	1.7	1.7	1.3	1.1	1.2	1.1	1.1	1.1	1.1
CAH 2014-2		1.0	1.1	1.0	1.0	1.3	1.1	1.1	1.3	1.5	1.5	1.1	0.9
CAH 2015-1		1.4	1.2	1.4	1.1	1.2	1.2	1.1	1.0	1.0	0.9	1.0	1.0
CSH 2016-1		1.0	0.8	0.9	0.8	0.8	0.9	1.1	1.2	1.2	1.3	1.2	1.1
CSH 2016-2				1.0	1.1	1.1	1.1	0.9	1.3	1.6	1.2	0.9	1.0
HPA 2016-1		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
HPA 2016-2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
HPA 2017-1											0.0	0.0	0.0
IH 2014-SFR2		1.5	1.6	1.6	1.6	1.8	1.9	2.3	2.1	2.3	2.0	2.0	2.1
IH 2014-SFR3		1.7	1.6	1.7	1.7	1.6	1.8	1.8	1.9	2.1	2.4	2.4	2.1
IH 2015-SFR1		2.2	2.4	2.0	2.5	2.2	2.2	2.1	2.1	2.3	2.2	1.8	2.0
IH 2015-SFR2		2.2	2.0	2.0	1.7	1.8	2.4	2.6	2.3	2.2	2.3	1.5	2.0
IH 2015-SFR3		2.2	2.4	2.2	2.3	2.4	2.4	2.3	2.3	2.1	2.1	2.0	1.9
PRD 2015-SFR2		2.0	2.4	2.3	2.6	2.9	2.9	2.9	3.6	2.9	2.3	2.2	1.9
PRD 2015-SFR3		2.5	1.9	1.6	1.6	1.7	1.9	2.1	2.9	3.0	3.5	3.6	3.5
PRD 2016-SFR1		2.0	2.0	2.0	2.5	2.9	3.3	3.6	3.4	3.1	2.7	2.2	2.1
PRD 2016-SFR2				1.7	1.5	1.6	1.4	1.5	2.5	2.8	3.3	3.7	3.3
PRD 2017-SFR1												1.7	2.3
TAH 2016-SFR1			6.9	6.7	7.2	7.5	8.1	8.3	8.7	9.0	10.1	10.8	11.0
TAH 2017-SFR1													5.9
Overall SFR		2.7	2.8	2.6	2.6	2.8	3.0	3.1	3.4	3.5	3.5	3.4	3.4

Table 10 – Monthly Turnover Rate

		Year 2016			Year 2017								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
AH4R 2014-SFR2		2.9	2.5	2.3	2.5	3.0	2.5	3.5	4.9	4.6	3.9	3.9	TBD
AH4R 2014-SFR3		2.6	2.6	2.2	2.9	2.9	3.2	2.5	3.9	4.3	5.1	4.3	TBD
AH4R 2015-SFR1		3.4	2.9	3.0	3.1	2.6	2.9	2.9	3.9	4.2	4.2	4.1	TBD
AH4R 2015-SFR2		2.4	2.4	3.0	2.5	3.3	4.3	3.9	5.0	5.8	4.4	3.7	TBD
AMSR 2016-SFR1			2.4	1.7	2.6	2.5	2.7	2.3	2.8	3.5	3.3	2.5	TBD
CAH 2014-1		3.3	3.3	2.3	2.5	2.3	2.7	2.3	4.7	3.9	4.2	3.7	TBD
CAH 2014-2		2.9	2.4	2.1	2.4	2.9	3.0	3.1	4.0	3.9	3.2	3.5	TBD
CAH 2015-1		3.1	2.6	2.3	2.3	2.2	2.3	3.1	4.0	4.6	3.8	4.1	TBD
CSH 2016-1		3.2	2.6	2.2	2.0	3.0	2.8	3.5	3.4	3.9	3.4	3.6	TBD
CSH 2016-2				3.5	3.1	2.5	3.5	3.1	4.1	3.4	4.3	4.5	TBD
HPA 2016-1		2.5	1.6	1.8	1.7	1.4	2.2	3.0	2.6	3.3	3.5	5.1	TBD
HPA 2016-2		1.0	0.7	0.9	0.8	1.0	2.1	2.8	4.4	7.5	3.6	1.9	TBD
HPA 2017-1											2.2	2.5	TBD
IH 2014-SFR2		2.8	2.6	1.8	2.2	2.3	2.6	2.9	3.4	3.7	4.0	3.8	TBD
IH 2014-SFR3		2.5	2.4	2.0	2.5	2.0	2.8	2.7	2.9	3.3	4.4	4.0	TBD
IH 2015-SFR1		2.2	2.6	2.7	2.9	2.8	2.7	2.7	2.3	2.6	3.6	3.6	TBD
IH 2015-SFR2		3.4	3.5	2.4	2.7	2.0	2.9	2.4	3.2	3.6	3.4	3.8	TBD
IH 2015-SFR3		2.9	3.0	2.6	2.7	2.7	3.1	2.4	2.7	3.0	3.0	3.4	TBD
PRD 2015-SFR2		3.8	2.8	2.9	2.6	2.5	3.6	3.2	4.2	3.7	3.0	3.2	TBD
PRD 2015-SFR3		2.4	1.6	1.5	1.6	1.4	2.4	2.1	4.1	5.5	7.1	4.6	TBD
PRD 2016-SFR1		2.8	2.8	2.7	3.0	2.5	3.6	3.4	3.6	4.0	3.5	3.2	TBD
PRD 2016-SFR2				5.5	1.8	1.3	2.1	2.2	2.9	4.2	5.2	5.3	TBD
PRD 2017-SFR1												7.5	TBD
TAH 2016-SFR1				1.9	1.5	2.4	2.8	2.4	3.1	3.4	3.1	2.8	TBD
TAH 2017-SFR1													TBD
Overall SFR		2.7	2.5	2.5	2.5	2.4	2.9	2.8	3.6	4.0	3.9	3.9	TBD

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Appendix I – Vacancy Versus Lease Expiration

AH4R 2014-SFR2 | AH4R 2014-SFR3 | AH4R 2015-SFR1

AH4R 2015-SFR2 | AMSR 2016-SFR1 | CAH 2014-1

CAH 2014-2 | CAH 2015-1 | CSH 2016-1

CSH 2016-2 | HPA 2016-1 | HPA 2016-2

HPA 2017-1 | IH 2014-SFR2 | IH 2014-SFR3

Legend:
- Vacancy
- Lease Expiration
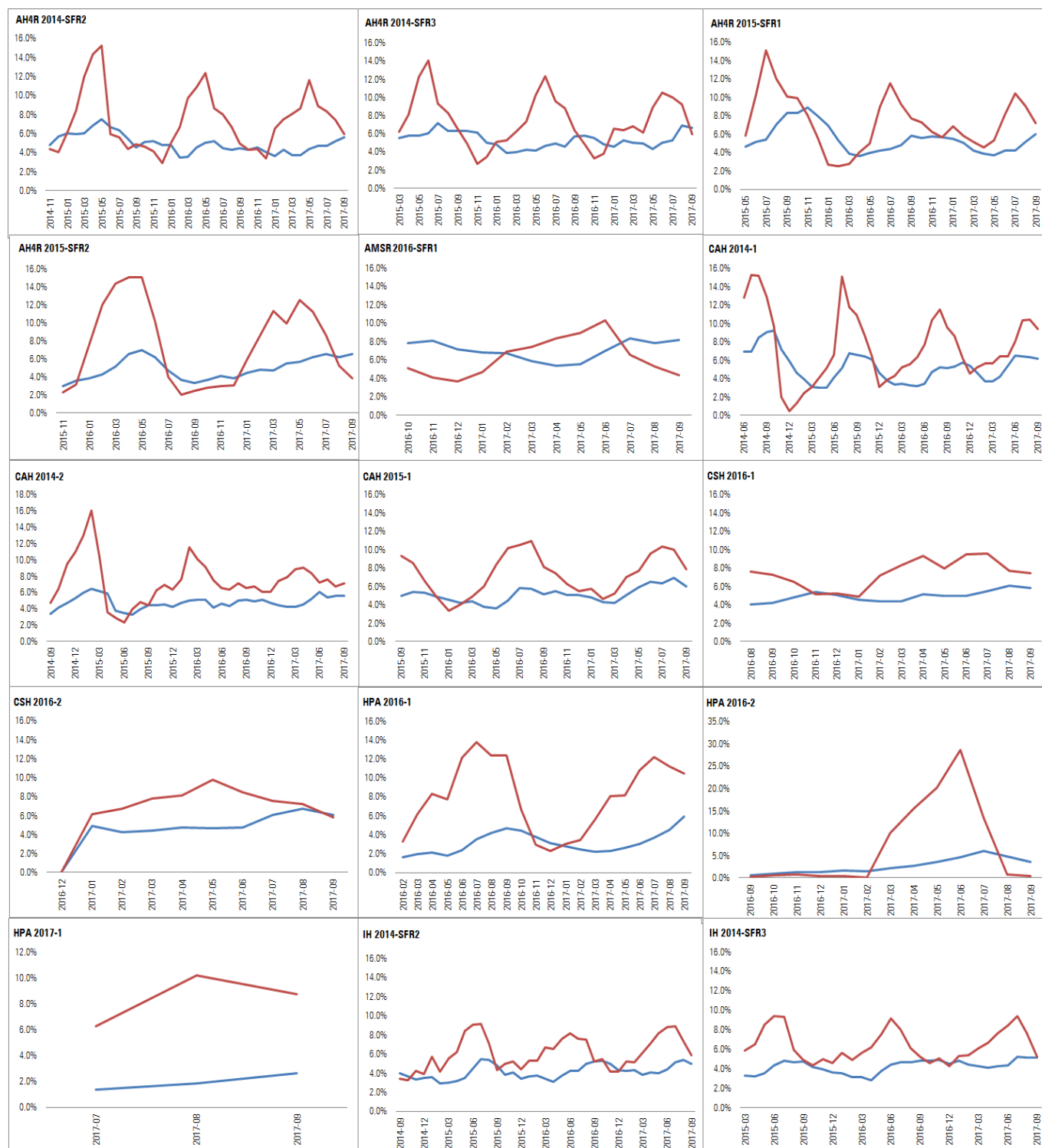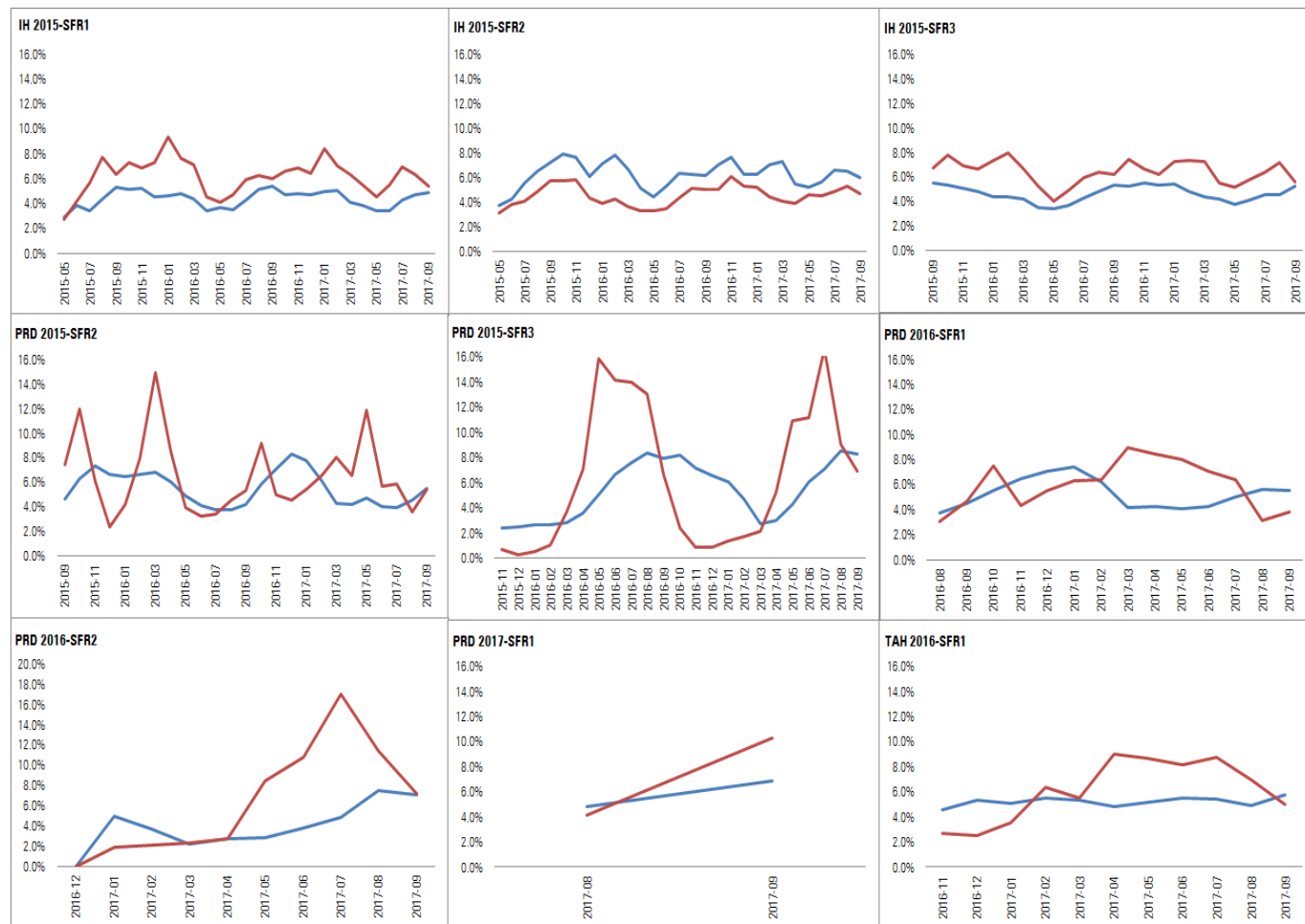
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Appendix II – Description of Analysis

Morningstar tracks key metrics to gauge the performance of single-borrower, single-family rental transactions. 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. B2R 2015-1 is secured by 136 loans; B2R 2015-2, 202 loans; B2R 2016-1, 161 loans; FKL 2015-SFR1, 16 loans; CAF 2015-1, 69 loans; CAF 2016-1, 85 loans; and CAF 2016-2, 71 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 6a and 6b 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.

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 section, Tables 3a, 3b, and 3c – Lease Expiration. 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 – 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 June 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 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 1 – Blended Rent Change (by Percentage) – Top MSAs

Table 1 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 2a, 2b, and 2c – Month-End Vacancy

Table 2a displays deal-level vacancy by the month-end count of empty properties. Table 2b shows the deal-level vacancy as a percentage of the total properties in each pool. Table 2c 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 3a, 3b, and 3c 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 3a, 3b, and 3c – 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

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date. To determine September lease expirations, Morningstar looks for all September lease expirations in the June 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 7. 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 4a and 4b – Historical Months of Vacancy

Tables 4a and 4b 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 4a shows historical months of vacancy by count, and Table 4b is as a percentage of the September vacancies.

Table 5 – Delinquency 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 5 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.

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Tables 6a and 6b – Month-End Delinquency

Table 6a shows the month-end count of delinquencies based on the definition in Table 5, and Table 6b 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 5.

Table 7 – 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 3a 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 7 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 June property tape to determine the lease status for May 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 8 – Monthly Retention Rate of MTM Leases

In Table 8, 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 August 2017 retention rates are the September statuses of August MTM tenants.

Tables 9a and 9b – MTM Tenants

In Tables 9a and 9b, 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.

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Table 10 – 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.

Download supporting Performance Summary Tables in Excel by clicking the download icon found at the top of each table and page one.

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