

CWC Capital Markets Update

Second Quarter 2017

In this Issue:

- Economy: Steady, slow, and low.
- Property price volatility in all classes
- Feature – Checking in on the CRE CLO Market –
Is there value in there somewhere?

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In this issue of the Capital Markets update, we focus on the fundamentals and trends affecting national commercial real estate debt markets and feature a look at the CRE CLO market in search of value. We synthesize and present information gathered from various industry research, public resources, and our own research.

The Economy

- The July jobs report noted that 209,000 jobs were added to the economy, with the unemployment rate falling to 4.3%, matching the levels in 2006. The participation rate improved slightly to 62.9%. The Bureau of Labor Statistics notes continued job growth in food and beverage services, professional and business services, and again, healthcare. Average hourly earnings rose by 2.5% year over year, which represents a growing trend. The BLS has previously noted the decline in retail trade jobs. This trend is likely to continue as internet shopping grows. WTI crude oil has traded between \$45-\$55/bbl for much of 2017.
- The 10-year US Treasury yield at 2.26%, is close to post election lows. We have seen a 2/10 flattening of 32bps YTD. While short rates have increased 50bps, 10yr rates have tightened by 14bps. From a lending standpoint, low rates continue as inflation remains below the Fed's target. The Bureau of Economic Analysis advance estimate reported GDP growth at an annualized rate of 2.6%, with a revised Q1 estimate of 1.2%. Forward trade policy, deficits associated with tax reform, and geopolitical events could all influence currency and interest rate trends.

Property Markets

- Effective rent growth - National average picked up to 3.46% year over year. Multi-family at 6.33%, retail at 1.86%.
- Vacancy rates – For the trailing 1 and 5 year periods, vacancy rates have generally improved, however both multifamily and retail are now showing increases year to date. Retail shows a 10bp increase year over year. Multifamily has the highest deliveries in over 18 years. We expect continuing vacancy increases in selected areas.
- National property prices report declines and volatility in all sectors, although we are still near peak levels. Year over year results for retail show a 12% decline. Interim data is sporadic, but downside volatility evident in all sectors.

Debt Capital Markets

- Q217 CMBS conduit issuance of \$11.9bn topped Q216 by 25% as investors became more comfortable with risk retention requirements and the maturity wave. YTD2017 issuance of \$20.3bn slightly ahead of YTD2016 of \$19.3bn.
- CMBS risk retention pricing - Horizontal subordinates in the 15% area, L-shaped subordinates in the 18% area.
- Current conduit delinquency is reported at 3.89% according to Trepp, with some 80% of such loans concentrated in the 2006/2007 vintages. We see refinance issues with 21% of maturing loans, a trend which has been increasing.

Three trends we are watching

- *Cyclical highs in property prices* - national average hotel, retail, and office property prices experiencing volatility. Risk premiums have widened out year to date in all sectors. As property values increase we see property re-levering with less and less sponsor equity. Multifamily valuations relative to cyclical highs, and construction of concern.
- *Transformation of the lending and investing base* - as conduit lenders and securitized markets withdraw, balance sheet and agency lenders increasing share. Subordinate investor base evolving to a new set of investors, including insurance, funds, and others with long term funding (in addition to traditional b-piece/ special servicer firms).
- *Maturity wave and risk retention* - increased loan defaults as maturities meet the securitized markets. Reduced liquidity, risk retention, bank capital rules, and regulatory requirements. Overall maturity defaults (later than 90 days past maturity) at 21% trending higher according to Morningstar data.

Feature – Checking in on the CRE CLO Market – Is there value in there somewhere?

- 2017 has seen a resurgence in CRE CLO Issuance. At 10 deals issued so far (\$3.7bn), we are on pace to the highest issuance in the past 5 years.
 - Multifamily properties make up some 60% of the balance, with 3 deals at or near 100%
 - Arbor and Prima Capital have led issuance (by number of deals) over the past 5 years
 - Collateral loans typically finance transitional properties with a 2-4 year fully extended term
 - Loan spreads average L+500, which is double that of stabilized FHLMC floating rate loans
 - Cost of non-risk retention debt for the CLO's has average L+170
 - Significant levered spreads available to the CLO Issuer

Deal >	ACR 2017-FL3	GSTNE 2017-FL1A	PFP 2017-3	ARCLO 2017-FL1	RAITF 2017-FL7	BSPRT 2017-FL1	RSO 2017-CRE5	RCMT 2017-FL1	HUNTC 2017-FL1	ARCLO 2017-FL2
Issuer	Ares	Greystone	Prime	Arbor	RAIT	Benefit St	Resource	ReadyCap	Hunt	Arbor
Closing Date	Mar-17	Mar-17	Mar-17	Apr-17	Jun-17	Jun-17	Jul-17	Aug-17	Aug-17	Aug-17
Collateral Bal	341.2	366.6	565.4	360.0	342.4	418.1	376.7	243.8	349.2	365.0
Multifamily	n/a	100%	37%	93%	46%	28%	62%	25%	59%	100%
Other	n/a	0%	63%	7%	54%	72%	38%	75%	41%	0%
Loan Count	12	30	27	27	23	27	20	38	24	24
WtdAv Spread	493	494	473	515	464	482	494	579	505	484
Notes A	170.6	207.1	314.9	201.6	191.7	223.6	203.4	141.4	202.6	208.1
B	37.5	25.7	44.7	27.0	16.3	48.0	48.0	18.5	17.5	14.6
C	10.2	62.3	33.5	50.4	21.4	67.9	49.9	14.9	23.1	19.2
D	20.5	-	32.6	-	19.7	-	-	24.0	22.3	17.3
E	34.1	-	46.1	-	27.8	-	-	8.2	25.3	23.7
F	-	-	11.3	-	14.1	-	-	10.3	30.6	29.2
G	-	-	24.1	-	14.1	-	-	-	-	-
PS	68.2	71.5	58.2	81.0	37.2	78.6	75.3	26.5	27.9	52.9
Total Notes	341.2	366.6	565.4	360.0	342.3	418.1	376.7	243.8	349.2	365.0
Spread A	120	155	105	130	100	135	80	85	100	99
B	140	275	130	250	120	240	200	165	130	125
C	225	475	175	450	145	425	350	225	165	155
D	305	1,000	250	-	235	-	-	385	240	235
E	475	-	350	-	350	-	-	600	330	325
F	-	-	575	-	550	-	-	800	550	600
G	-	-	800	-	750	-	-	-	-	-
Note A % of Deal	50.0%	56.5%	55.7%	56.0%	56.0%	53.5%	54.0%	58.0%	58.0%	57.0%
Debt Issued	272.9	295.1	471.8	279.0	249.1	339.5	301.4	207.0	290.7	312.1
Cost of Debt	185	233	146	199	116	208	144	157	138	175
Levered Spread	1725	1572	2117	1604	1396	1667	1896	2953	2330	2305

Note:

Cost of debt includes only those Notes assumed issued and not retained pursuant to risk retention.

Feature – Checking in on the CRE CLO Market - Is there value in there somewhere?

- Focusing on 2017 CLOs concentrated in multifamily transactions only, we can analyze and evaluate risk premiums associated with transitional loans. We can also benchmark that risk in search of relative value.
 - Borrowers typically pay an additional 260bp for a transitional loan (relative to a FHLMC floater).
 - Risks become apparent as properties are benchmarked.
 - CLO transitional product has more volatility given occupancy disruptions, potential construction delays, cost over-runs, and sometimes uncertain demand for upgraded units.
 - Occupancy typically 5 points lower at securitization.
 - NCF per unit is over 37% lower. With a 5pt occupancy variance, CLO properties may naturally command rents some 40% lower than stabilized FHLMC product prior to renovation. No guaranty that significantly increased rents are achievable given product or surrounding area.
 - CLO product shows higher leverage per unit with weaker DSC and debt yield metrics.
 - CLO product typically interest only, whereas stabilized may include mandatory amortization, and or refinance tests.
 - Risk mitigants for CLO Class A's - shorter loan term, 260bp premium, lower structure leverage

Overall	Units	Avg Occ	NCF / Unit	Appraisal / Unit	Loan / Unit	LTV	DSC	DY	Spread	Term
FREMF 2017-KF32	14,538	94.23	6,910	129,598	89,164	72.28	1.36	8.08	2.39	84
FREMF 2017-KF31	12,598	94.00	7,872	142,377	98,773	70.23	1.64	8.14	2.37	84
ARCLO 2017-FL1	4,427	84.78	4,502	97,757	57,957	69.84	1.14	6.68	5.21	36
ARCLO 2017-FL2	6,274	84.95	3,863	89,002	44,892	74.01	1.08	6.01	5.25	37
GSTNE 2017-FL1	6,570	92.95	4,655	70,840	55,800	78.84	1.45	8.55	5.06	36
RSO 2017-CRE5	2,984	90.55	5,149	99,464	78,199	79.72	1.04	6.61	4.78	36
PFP 2017-3	1,896	92.38	4,904	93,349	71,054	77.89	1.40	7.05	4.60	27
FREMF Benchmark	27,136	94.12	7,391	135,988	93,969	71.25	1.50	8.11	2.38	84
CLO Trans Comp	22,151	89.12	4,615	90,082	61,581	76.06	1.22	6.98	4.98	34
CLO Variance		(5.00)	(2,777)	(45,905)	(32,388)	4.80	(0.28)	(1.13)	2.60	(50)
CLO Variance %		-5.0%	-37.6%	-33.8%	-34.5%	6.7%	-18.4%	-13.9%	2.60	

		FHLMC Floaters				CLO Floaters			
		Tranche	Pct	Spread	Impl DY	Tranche	Pct	Spread	Impl DY
Control for variables and compare >	A		90.0%	37	9.01	A	55.47%	111	12.58
	B		2.5%	275	8.77	> Other	44.53%		6.98
	C		7.5%	1000	8.11				
			100.0%				100.0%		

- For all the potential risks of transitional CLO loans, the senior most bonds may offer an interesting relative value opportunity for those who can hold them.
 - At 55% of the capital stack, implied debt yield on the riskier properties is 12.6% vs 9.01% stabilized.
 - Add an additional 30bps to FHLMC A spread to account for guaranty, and 25bps for liquidity.
 - Low call protection on FHLMC KFs adds volatility and may shorten term to more comparable to CLO.
 - Adjusted spread on benchmark 92 vs CLO A's at 111 shows 20bp relative pick-up.
 - CLOs offer shorter term credit risk in an accommodating lending market vs long term risks.

Selected Market Data – Economic and Real Estate Fundamentals and Trends

	2006	2010	2011	2015	2016	Q2-17	1yr	5yr	10yr
<u>Economic</u>									
UNEMP	4.40	9.30	8.50	5.00	4.70	4.40	-0.50%	-3.80%	-0.20%
PART	66.40	64.30	64.00	62.60	62.70	62.80	0.10%	-1.00%	-3.20%
GDP	14,066	15,230	15,785	18,223	18,869	19,227	4.21%	4.10%	3.51%
CPI-TTM	1.77%	1.15%	2.47%	1.44%	1.91%	1.79%	1.26%	0.22%	-0.59%
UST IMPL INF	2.30%	2.30%	1.96%	1.54%	1.95%	1.73%	0.32%	-0.40%	-0.65%
<u>Interest Rate</u>									
1M LIBOR	5.35%	0.32%	0.35%	0.43%	0.77%	1.22%	0.76%	0.92%	-4.10%
Eff Fed Funds	5.24%	0.18%	0.07%	0.24%	0.50%	1.05%	0.65%	0.89%	-4.20%
Prime	8.25%	3.25%	3.25%	3.37%	3.75%	4.25%	0.75%	1.00%	-4.00%
UST2	4.82%	0.61%	0.25%	1.06%	1.20%	1.38%	0.76%	1.05%	-3.49%
UST10	4.71%	3.30%	1.89%	2.27%	2.45%	2.31%	0.81%	0.64%	-2.72%
2/10 Spread	-0.11%	2.69%	1.64%	1.21%	1.25%	0.93%	0.05%	-0.41%	0.77%
Real10	2.41%	1.00%	-0.07%	0.73%	0.50%	0.58%	0.49%	1.04%	-2.07%
<u>Vacancy (REIS)</u>									
Multi	5.80%	6.60%	5.30%	4.40%	4.20%	4.40%	-0.10%	-0.40%	-1.30%
Retail	7.10%	11.00%	11.00%	10.00%	9.90%	10.00%	0.10%	-0.80%	2.50%
Office	13.40%	17.60%	17.40%	16.20%	15.80%	16.00%	0.00%	-1.30%	3.40%
Industrial	n/a	14.00%	13.20%	10.60%	10.30%	9.70%	-0.80%	-3.00%	n/a
Hotel									
<u>Rents (REIS Effective)</u>									
Multi	930	987	1,010	1,183	1,252	1,277	6.33%	4.72%	3.11%
Retail	17.16	16.51	16.50	17.54	17.89	18.05	1.86%	1.83%	0.27%
Office	22.21	22.09	22.54	24.97	25.93	26.14	3.04%	2.98%	0.65%
Industrial	n/a	4.21	4.19	4.55	4.66	4.72	2.61%	2.32%	n/a
Hotel									
<u>National \$PSF (RCA)</u>									
Multi	113,416	99,503	103,330	148,228	152,206	141,637	0.35%	8.31%	4.85%
Retail	174	152	175	213	200	196	-12.59%	0.44%	0.36%
Office	232	222	213	239	235	250	-8.09%	4.44%	-1.39%
Industrial	67	51	60	73	78	82	3.80%	10.75%	1.34%
Hotel	136,505	138,350	98,187	138,162	153,841	144,790	-5.09%	11.41%	1.65%
<u>National Cap Rate (RCA)</u>									
MF	6.23%	6.55%	6.26%	5.91%	5.70%	5.60%	-0.19%	-0.62%	-0.69%
Ret	6.66%	7.61%	7.41%	6.48%	6.52%	6.60%	0.19%	-0.66%	0.13%
Office	6.69%	7.57%	7.32%	6.70%	6.59%	6.70%	0.10%	-0.49%	0.18%
Ind	7.14%	8.23%	7.69%	6.61%	6.80%	6.70%	-0.10%	-0.67%	-0.09%
Hotel	8.92%	8.21%	7.94%	8.38%	8.50%	8.70%	0.20%	0.68%	-0.22%
<u>Risk Premium</u>									
MF	1.52%	3.25%	4.37%	3.64%	3.25%	3.29%	-1.00%	-1.26%	2.03%
Ret	1.95%	4.31%	5.52%	4.21%	4.07%	4.29%	-0.62%	-1.30%	2.85%
Office	1.98%	4.27%	5.43%	4.43%	4.14%	4.39%	-0.71%	-1.13%	2.90%
Ind	2.43%	4.93%	5.80%	4.34%	4.35%	4.39%	-0.91%	-1.31%	2.63%
Hotel	4.21%	4.91%	6.05%	6.11%	6.05%	6.39%	-0.61%	0.04%	2.50%



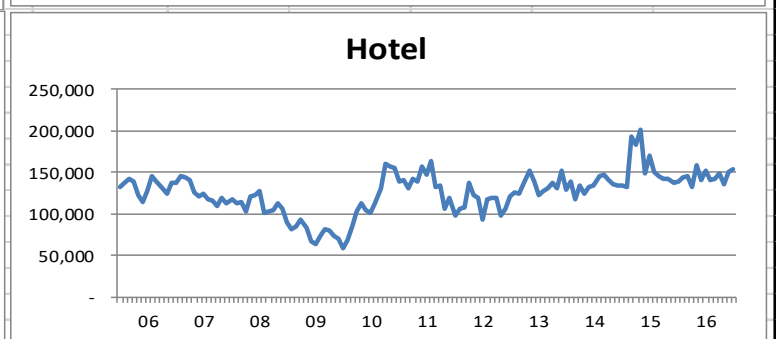
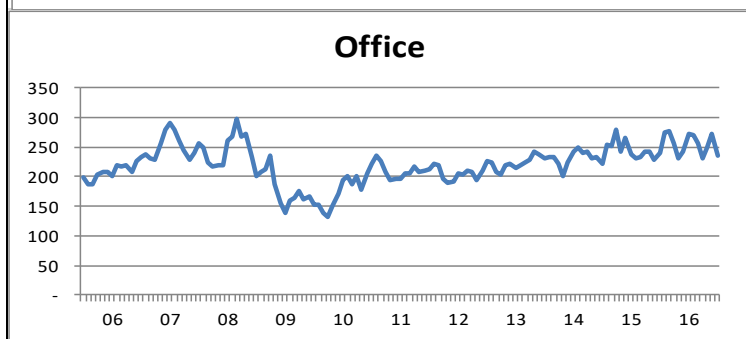
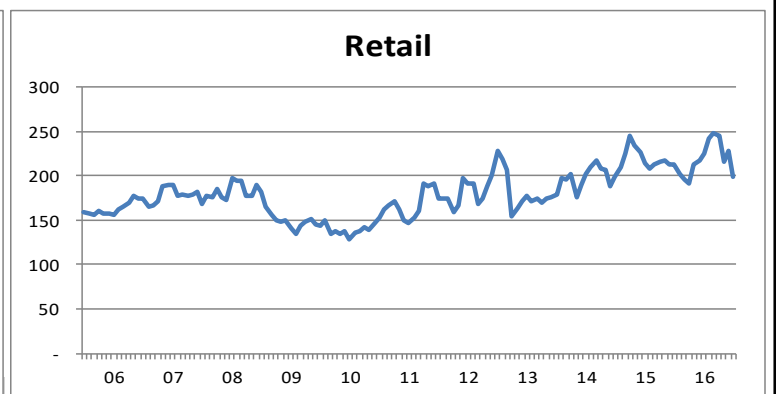
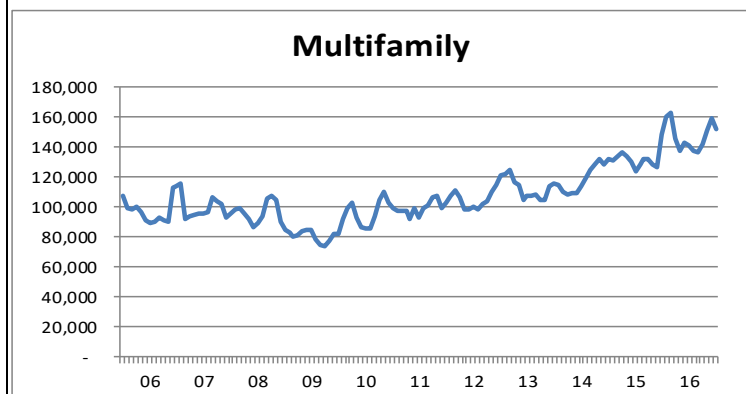
CRE Fundamentals – Property Price, Fundamentals, and Trends

Year End	National Average \$price / unit				
	MF	Retail	Hotel	Ofc	Ind
2005	107,027.7	158.3	133,060.5	197.5	62.1
2006	113,416.2	174.3	136,504.5	232.4	66.7
2007	95,251.4	168.9	117,311.2	255.0	68.6
2008	84,671.0	181.3	89,940.8	199.7	63.1
2009	81,953.2	144.0	59,012.2	151.5	47.3
2010	99,502.6	152.1	138,350.5	222.2	51.3
2011	103,329.8	174.8	98,186.8	213.3	60.1
2012	120,788.9	228.0	121,202.3	225.8	62.1
2013	115,918.7	178.3	129,720.0	230.7	64.8
2014	132,159.3	198.4	134,397.7	222.6	69.3
2015	148,228.2	212.7	138,162.4	239.0	72.7
2016	152,206.0	199.6	153,841.0	234.9	77.7
1H17	141,637.0	196.0	144,790.0	250.0	82.0
Peak	163,281.9	248.1	201,238.3	298.5	88.0
Trough	73,804.9	128.0	59,012.2	132.0	44.7
Fall fr '06	34.93%	26.55%	56.77%	43.20%	33.07%
Peak Date	Feb-16	Aug-16	Apr-15	Aug-08	Nov-16
Trough Date	Sep-09	Jun-10	Dec-09	Mar-10	Apr-10
Curr vs '06	24.9%	12.5%	6.1%	7.6%	22.9%
Curr vs Pk	-13.3%	-21.0%	-28.1%	-16.2%	-6.8%
Curr vs Tr	91.9%	53.1%	145.4%	89.4%	83.6%

5yr GR	8.1%	2.7%	9.4%	1.9%	5.3%
10yr GR	3.0%	1.4%	1.2%	0.1%	1.5%
Volatility	12.5%	13.7%	32.5%	18.2%	11.4%

Year End	Vacancy Trend				
	MF	Retail	Hotel	Ofc	Ind
2005	5.70	6.80	-	14.70	-
2006	5.80	7.10	-	13.40	-
2007	5.70	7.50	-	12.60	-
2008	6.70	8.90	-	14.50	-
2009	8.00	10.60	-	17.00	-
2010	6.60	11.00	-	17.60	14.00
2011	5.30	11.00	-	17.40	13.20
2012	4.60	10.70	-	17.10	12.10
2013	4.30	10.40	-	16.90	11.60
2014	4.20	10.20	-	16.70	11.20
2015	4.40	10.00	-	16.20	10.60
2016	4.20	9.90	-	15.80	10.30
1H17	4.40	10.00	-	16.00	9.70

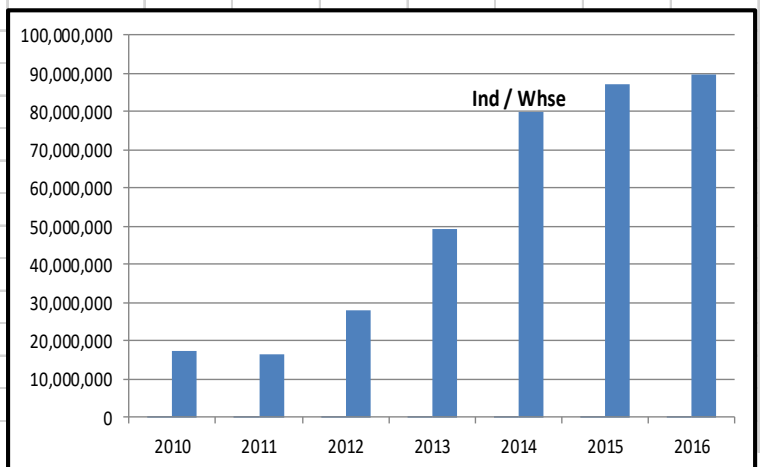
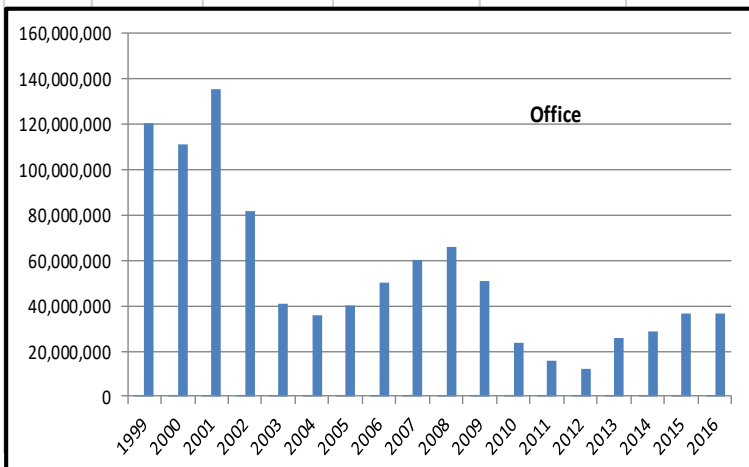
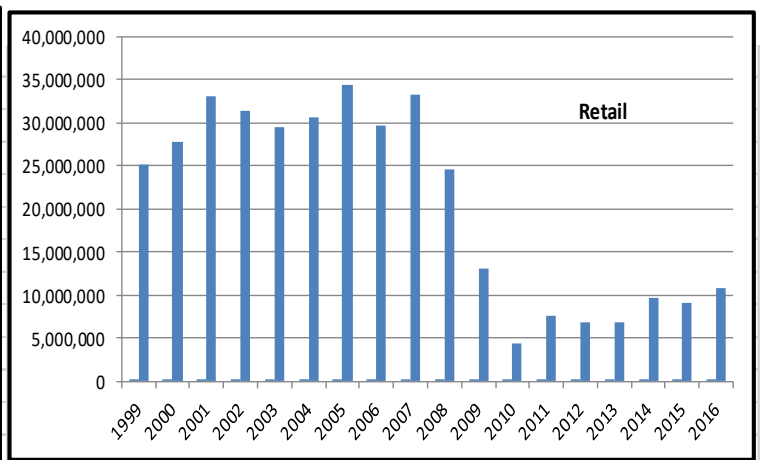
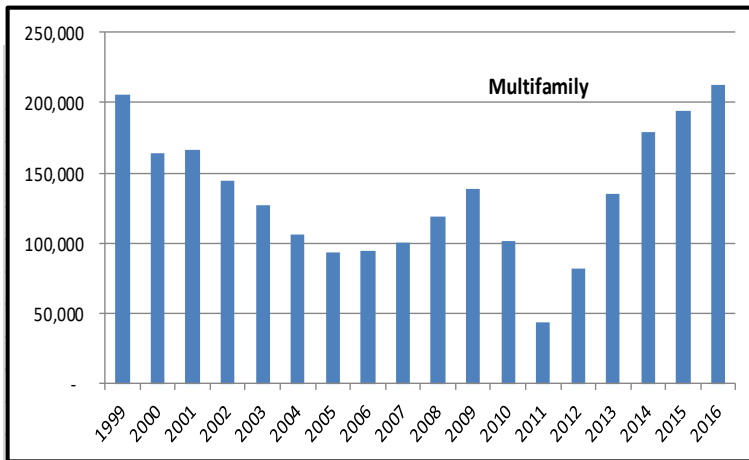
Year End	Rent Growth Trend				
	MF	Retail	Hotel	Ofc	Ind
2005	2.89	3.23	-	3.19	-
2006	4.38	3.37	-	8.93	-
2007	4.73	2.39	-	10.54	-
2008	1.95	(1.02)	-	0.24	-
2009	(2.92)	(3.68)	-	(8.86)	-
2010	2.39	(1.43)	-	(1.52)	-
2011	2.43	(0.06)	-	2.04	(0.48)
2012	3.86	0.48	-	1.95	1.91
2013	3.33	1.51	-	2.22	1.64
2014	3.69	1.96	-	3.02	2.76
2015	5.16	2.21	-	3.18	2.02
2016	5.83	2.00	-	3.84	2.42





CRE Fundamentals – New Construction and Delivery Trends

Year	Multi	Retail	Office	Ind / Whse	Notes
1999	205,818	25,126,000	120,280,000	-	
2000	164,674	27,727,000	111,061,000	-	
2001	166,124	33,013,000	134,904,000	-	* Record Multifamily deliveries. REIS expects 35% Year/Year growth in 2017.
2002	143,957	31,369,000	81,422,000	-	
2003	127,591	29,416,000	41,016,000	-	* Steady retail deliveries in the last 3 years (approx 9-10mm sqft),
2004	106,144	30,596,000	35,475,000	-	
2005	93,227	34,438,000	39,792,000	-	* YTD 2017 vs 2016 (annualized)
2006	95,205	29,627,000	49,879,000	-	
2007	100,630	33,254,000	59,902,000	-	-New retail deliveries down 16% relative to 2016's seven year high at 10.8mm sqft
2008	119,330	24,545,000	65,450,000	-	
2009	138,775	13,142,000	50,548,000	-	
2010	101,691	4,499,000	23,375,000	17,234,000	-Industrial deliveries trending lower by 10% relative to 2016's high of 89mm sqft
2011	43,489	7,625,000	15,440,000	16,598,000	
2012	81,399	6,778,000	12,443,000	28,002,000	
2013	135,614	6,883,000	25,959,000	49,178,000	-Multifamily some 18% lower from 2016, however, 2016 recorded the highest level of deliveries in 18 years. Multifamily has been on a 6 year run of increased deliveries. New household formation and rent vs own preference driving.
2014	179,358	9,776,000	28,287,000	80,009,000	
2015	194,459	9,088,000	36,642,000	86,962,000	
2016	213,243	10,815,000	36,659,000	89,732,000	
1H17	87,706	4,550,000	17,061,000	40,356,000	





Securitized Markets - 2017

Type		SERIES	Pricing	AMOUNT	SERVICER	SPSERV	B-PIECE	#PROP	#LOAN	RR Type	RR Yld
CMBS	Conduit	CD 2017-CD3	01/27/17	1,327.48	Midland	Midland	KKR	59	52	L	18.25
		BACM 2017-BNK3	02/02/17	977.09	Wells Fargo	Midland	BlackRock	94	63	VERT	
		BBCMS 2017-C1	02/16/17	855.75	Wells Fargo	Rialto Capital	Rialto Capital	75	58	VERT	
		WFCM 2017-RC1	02/28/17	624.91	Wells Fargo	LNR Partners	Silverpeak	77	60	VERT	
		GSMS 2017-GS5	03/07/17	1,061.94	Midland	Rialto Capital	Rialto Capital	72	32	L	18.25
		JPMCC 2017-JP5	03/07/17	1,092.98	Midland	LNR Partners	LNR Partners	59	43	HRZ	14.00
		JPMDB 2017-C5	03/17/17	1,043.45	Wells Fargo	CWCAM	MassMutual	50	35	HRZ	13.90
		WFCM 2017-RB1	03/22/17	637.56	Wells Fargo	C-III	C-III	72	37	VERT	
		LSTAR 2017-5	03/24/17	758.77	Wells Fargo	Hudson	Lone Star Funds	32	29	HRZ	16.00
		CGCMT 2017-P7	03/31/17	1,025.32	Wells Fargo	Rialto Capital	Rialto Capital	58	46	L	18.62
		BANK 2017-BNK4	04/05/17	1,008.19	Wells Fargo	Rialto Capital	Rialto Capital	64	48	VERT	
		CD 2017-CD4	04/28/17	900.45	Midland	Rialto Capital	Rialto Capital	53	47	VERT	
		MSBAM 2017-C33	05/04/17	702.57	Wells Fargo	Midland	KKR	70	44	L	17.50
		CFCRE 2017-C8	05/18/17	644.66	Wells Fargo	Rialto Capital	Rialto Capital	67	43	VERT	
		GSMS 2017-GS6	05/19/17	959.13	Midland	Midland	KKR	73	33	L	17.25
		MSC 2017-H1	05/24/17	1,089.87	Midland	LNR Partners	Silverpeak	89	58	HRZ	14.35
		JPMCC 2017-JP6	05/25/17	786.62	Midland	Rialto Capital	Rialto Capital	72	42	HRZ	14.00
		UBSCM 2017-C1	05/31/17	958.99	Wells Fargo	CWCAM	Colony NorthStar	134	67	HRZ	14.75
		DBJPM 2017-C6	06/14/17	1,132.40	Midland	Midland	KKR	196	41	L	17.75
		BANK 2017-BNK5	06/16/17	1,231.29	Wells Fargo	CWCAM	Eightfold	211	87	VERT	
		CSAIL 2017-C8	06/21/17	883.06	Wells Fargo	Midland	Eightfold	55	32	L	25.05
		LCCM 2017-LC26	06/22/17	625.65	Wells Fargo	Midland	KKR	69	57	L	18.25
		WFCM 2017-C38	06/27/17	1,154.65	Wells Fargo	KeyBank	Prime Group	210	76	L	17.88
		BANK 2017-BNK6	07/14/17	933.25	Wells Fargo	Midland	Prime Group	189	72	VERT	
		JPMCC 2017-JP7	07/21/17	811.00	Wells Fargo	CWCAM	MassMutual	168	37	HRZ	
CD 2017-CD5	07/24/17	931.65	Wells Fargo	Rialto Capital	Rialto Capital	134	48	L			

24,158.69

SASB

MSC 2017-PRME	01/26/17	365.00	KeyBank	KeyBank	-	5	1	VERT	
GSMS 2017-485L	02/03/17	350.00	Midland	Aegon	-	1	1	HRZ	
OMPT 2017-1MKT	02/15/17	975.00	Wells Fargo	Wells Fargo	-	1	1	HRZ	
CST 2017-SKY	03/16/17	1,020.00	Wells Fargo	Wells Fargo	-	1	1	HRZ	
CSMC 2017-HD	03/17/17	218.60	KeyBank	Aegon	-	2	1	HRZ	
COLD 2017-ICE3	04/20/17	1,295.00	Wells Fargo	Trimont	-	54	1	HRZ	
GSMS 2017-GPTX	04/26/17	465.00	Midland	Midland	-	1	1	VERT	
CSMC 2017-LSTK	05/04/17	272.00	KeyBank	Aegon	-	1	1	HRZ	
NCMS 2017-75B	05/10/17	143.00	KeyBank	KeyBank	-	1	1	VERT	
HPLY 2017-HIT	05/10/17	805.00	KeyBank	Strategic Asset	-	87	1	VERT	
OT 2017-OT	05/12/17	480.00	KeyBank	KeyBank	-	1	1	VERT	
PRKAV 2017-245P	05/17/17	500.00	Wells Fargo	Aegon	-	1	1	HRZ	
CLNS 2017-IKPR	05/18/17	754.00	Wells Fargo	KeyBank	-	47	1	VERT	
CGDB 2017-BIO	06/01/17	330.00	KeyBank	Aegon	-	18	1	VERT	
DAFC 2017-AMO	06/02/17	185.00	KeyBank	Cohen Financial	-	1	1	HRZ	
HMH 2017-NSS	06/09/17	204.00	Wells Fargo	Aegon	-	22	1	HRZ	
DBG 2017-BBG	06/14/17	500.00	Wells Fargo	Wells Fargo	-	1	1	HRZ	
JPMCC 2017-MARK	06/15/17	115.00	Wells Fargo	Wells Fargo	-	1	1	VERT	
CSMC 2017-CHOP	06/20/17	780.00	Wells Fargo	Midland	-	48	1	HRZ	
RPT 2017-ROSS	06/21/17	500.00	Wells Fargo	Trimont	-	7	1	HRZ	
BXP 2017-GM	06/21/17	1,555.00	Wells Fargo	Aegon	-	1	1	VERT	
IMT 2017-APTS	06/29/17	536.00	Wells Fargo	Aegon	-	11	1	HRZ	
WTOWN 2017-KNOX	07/11/17	150.00	Wells Fargo	Wells Fargo	-	1	1	VERT	
MSDB 2017-712F	07/13/17	300.00	Wells Fargo	Wells Fargo	-	1	1	VERT	
CSMC 2017-MOON	07/14/17	125.70	KeyBank	Aegon	-	1	1	HRZ	
CGMS 2017-MDDR	07/14/17	706.66	Wells Fargo	Wells Fargo	-	52	3	VERT	
JPMCC 2017-MAUI	07/24/17	469.00	KeyBank	Aegon	-	1	1	HRZ	
GSMS 2017-500K	07/26/17	334.00	Wells Fargo	Wells Fargo	-	1	1	HRZ	
BX 2017-SLCT	07/27/17	1,393.50	KeyBank	KeyBank	-	96	1	VERT	

15,826.46

Subordinate Buyer	Conduit	SASB	Total	Special Service	Conduit	SASB	Total	Type	Balance	Deals	
Rialto Capital	7,214.58	-	7,214.58	Midland	7,540.64	1,245.00	8,785.64	Conduit			
KKR	4,747.24	-	4,747.24	Rialto Capital	7,214.58	-	7,214.58				
Eightfold	2,114.34	-	2,114.34	CWCAM	4,044.73	-	4,044.73		L	9,803.86	10
Prime Group	2,087.90	-	2,087.90	LNR Partners	2,807.76	-	2,807.76		VERT	7,813.15	9
MassMutual	1,854.46	-	1,854.46	C-III	637.56	-	637.56		HRZ	6,541.68	7
Silverpeak	1,714.78	-	1,714.78	Hudson	758.77	-	758.77			24,158.69	26
LNR Partners	1,092.98	-	1,092.98	Wells Fargo	-	4,100.66	4,100.66				
Blackrock	977.09	-	977.09	Trimont	-	1,795.00	1,795.00				
Colony Northstar	958.99	-	958.99	Keybank	1,154.65	3,135.50	4,290.15		SASB		
Lone Star Funds	758.77	-	758.77	Aegon	-	4,560.30	4,560.30		VERT	7,562.16	13
C-III	637.56	-	637.56	Cohen Financial	-	185.00	185.00	HRZ	8,264.30	16	
-	-	15,826.46	15,826.46	Strategic Asset	-	805.00	805.00	L	-	-	
									15,826.46	29	
Total	24,158.69	15,826.46	39,985.15		24,158.69	15,826.46	39,985.15		39,985.15		



Securitized Markets - 2017

Type	SERIES	Pricing	AMOUNT	SERVICER	SPSERV	B-PIECE	#PROP	#LOAN	
FREMF	7-Year	FREMF 2017-K724	01/13/17	1,172.94	Midland	Midland	Related Cos.	58	58
		FREMF 2017-K725	04/12/17	1,181.40	Midland	Wells Fargo	Ares Management	52	52
		FREMF 2017-K726	06/21/17	1,132.04	Midland	KeyBank	Berkshire Group	49	49
10-Year		FREMF 2017-K61	01/19/17	1,261.09	Wells Fargo	Wells Fargo	Berkshire Group	69	69
		FREMF 2017-K62	02/17/17	1,444.06	KeyBank	Midland	Cyrus Capital	67	67
		FREMF 2017-K63	03/07/17	1,520.16	KeyBank	Wells Fargo	New York Mtg Tru:	46	46
		FREMF 2017-K64	05/03/17	1,550.00	Wells Fargo	Wells Fargo	Bridge	71	71
		FREMF 2017-K65	07/12/17	1,307.27	Wells Fargo	Midland	Related Cos.	72	72
15-Year	FREMF 2017-K1503	04/19/17	878.08	KeyBank	CWCAM	Ang Grdn, McDowe	44	44	
Floater		FREMF 2017-KF27	02/07/17	1,401.99	Wells Fargo	Wells Fargo	Bridge	55	55
		FREMF 2017-KF28	03/02/17	1,311.50	Wells Fargo	CWCAM	Kayne Anderson	61	61
		FREMF 2017-KF29	04/04/17	1,460.76	Midland	KeyBank	Priderock	54	54
		FREMF 2017-KF30	05/09/17	1,295.76	KeyBank	KeyBank	Harbor Group	56	56
		FREMF 2017-KF31	06/01/17	1,244.35	KeyBank	CWCAM	Kayne Anderson	45	45
		FREMF 2017-KF32	07/20/17	1,296.27	KeyBank	Wells Fargo	Bridge	58	58
Jr Lien		FREMF 2017-KJ11	01/31/17	265.16	Freddie Mac	Wells Fargo	Waterton	62	66
		FREMF 2017-KJ12	02/28/17	302.23	Freddie Mac	CWCAM	Kayne Anderson	65	65
		FREMF 2017-KJ13	04/05/17	345.32	Freddie Mac	Wells Fargo	Berkshire Group	60	61
		FREMF 2017-KJ14	06/14/17	285.78	Freddie Mac	CWCAM	Kayne Anderson	53	53
		FREMF 2017-KJ15	07/25/17	342.34	Freddie Mac	Wells Fargo	Ares Management	54	55
Small Bal		FRESB 2017-SB26	01/18/17	220.57	Freddie Mac	Sabal Financial	Sabal Financial	84	84
		FRESB 2017-SB27	02/15/17	246.33	Freddie Mac	Arbor	Axon Capital	93	93
		FRESB 2017-SB28	03/15/17	322.96	Freddie Mac	Trimont	Garrison	151	151
		FRESB 2017-SB29	04/06/17	217.19	Freddie Mac	Hunt Mortgage	Hunt Mortgage	100	100
		FRESB 2017-SB30	05/04/17	306.94	Freddie Mac	Sabal Financial	Sabal Financial	132	132
		FRESB 2017-SB31	05/19/17	263.90	Freddie Mac	KeyBank	Axon Capital	98	98
		FRESB 2017-SB32	06/07/17	322.21	Freddie Mac	Trimont	Garrison	144	144
		FRESB 2017-SB33	06/16/17	219.85	Freddie Mac	KeyBank	Sutherland	108	108
		FRESB 2017-SB34	07/12/17	327.37	Freddie Mac	Arbor	Axon Capital	125	125
		FRESB 2017-SB35	07/21/17	316.97	Freddie Mac	Sabal Financial	Sabal Financial	114	114
	SASB		FREMF 2017-KIR2	05/18/17	384.01	Midland	Freddie Mac	Irvine Co.	4
		FREMF 2017-KSW2	07/18/17	1,112.63	Midland	CWCAM	Kayne Anderson	36	36
Wkforce Senior		FREMF 2017-KW02	03/22/17	501.96	Wells Fargo	Wells Fargo	Bridge	52	52
		FREMF 2017-KS08	05/16/17	734.99	Wells Fargo	CWCAM	Kayne Anderson	36	36
Large		FREMF 2017-KL01	05/26/17	511.56	Wells Fargo	Wells Fargo	Bridge	2	2
LIHTC		FRETE 2017-ML02	06/14/17	20.57	Freddie Mac	Midland	-	3	3

27,028.49

Subordinate Buyer	Deals	Deal Balance	Special Service	Deals	Deal Balance
Kayne Anderson	6	4,991.47	Wells Fargo	11	10,177.25
Bridge	5	5,261.78	CWCAM	7	5,869.55
Berkshire Group	3	2,738.45	KeyBank	5	4,372.31
Related Cos.	2	2,480.22	Midland	4	3,944.84
Ares Management	2	1,523.73	Sabal Financial	3	844.47
New York Mtg Trust	1	1,520.16	Trimont	2	645.17
Priderock	1	1,460.76	Arbor	2	573.70
Cyrus Capital	1	1,444.06	Freddie Mac	1	384.01
Harbor Group	1	1,295.76	Hunt Mortgage	1	217.19
Ang Grdn, McDowell	1	878.08			
Sabal Financial	3	844.47			
Axon Capital	3	837.60			
Garrison	2	645.17			
Irvine Co.	1	384.01			
Waterton	1	265.16			
Sutherland	1	219.85			
Hunt Mortgage	1	217.19			
-	1	20.57			
	36	27,028.49		36	27,028.49



Sources

The third-party Information set forth herein is derived from the following sources:

Bloomberg

CBRE Capital Markets

Citibank Research

Commercial Mortgage Alert

CRE Direct

FHLMC

Intex Solutions

Maximus Ten-X

Morningstar Research

Moody's / RCA CPPI

Real Capital Analytics

REIS

Trepp Information Systems

US Bureau of Labor Statistics

US Census Bureau

US Federal Reserve

US Treasury

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