



CWC Capital Markets Update

September 2016

CWC Capital Markets Update, September 2016

In this issue of the Capital Markets update, we focus on the fundamentals and trends affecting national commercial real estate debt markets and take a brief look at the performance of FREMF KF transactions relative to CMBS conduits. We synthesize and present information gathered from various industry research, public resources, and our own research.

The Economy

- August saw 151,000 jobs added to the economy, below analyst estimates of 180,000. The unemployment rate remained at 4.9% and the participation rate remained steady at 62.8, still over 100bps below the 10-year average.
- The Bureau of Labor Statistics notes job growth in food service, social service, healthcare, and financial services. We see strength in multifamily and residential construction, with gains offset by continued losses in mining, oil and gas extraction (WTI remains low to mid \$40/bbl), and in services in areas with declining demographic trends.
- Although we have seen recent upticks in 10-year US Treasury yields, trends of low (or negative) interest rates continue. August ended with a nominal UST10 yield at 1.58%, but the real 10yr rate was a mere 11bps. The last 12 months have seen an average UST10 real rate of 35bps with readings dipping into negative territory in July. (-3bps). Global growth concerns could continue to restrain short term interest rate hikes.

Property Markets

- Effective rent growth - National average of 2.98% annual. Multi-family leads at 4.25%, retail lags at 2.13%.
- Vacancy rates - Multifamily saw an increase of 10bps to 4.50% relative to year end. This is the highest reading in three years. The trend bears watching as robust construction and deliveries continue.
- Although national property prices on a \$/unit basis (year over year) generally report increases as of Q2-16, we have seen four interim months of declines in hotel, retail, and office prices. We note that 3-year growth rates have generally been decelerating for the past year in hotel and retail properties.

Debt Capital Markets

- Conduit originations and issuance have slowed significantly this year as market volatility, liquidity, and risk retention all begin to apply. Current year issuance as of August lags 2015's same period issuance by 38%.
- Credit spreads on new issue long AAAs have now tightened by 54bp since the year began, with BBBs tightening by 100 amid significant volatility this year. AAA's have varied by 80bp, while BBBs have varied by as much as 400bp.
- Delinquency trends have been on the increase for four months now, and are at 4.68% according to Trepp. Maturity wave and conduit market contraction are driving the reversal of several years of declining delinquency.

Three trends we are watching

- *Maturity wave and risk retention* - potential for increased loan defaults as liquidity recedes from securitized markets due to risk retention, bank capital rules, and regulatory requirements. Overall maturity defaults (later than 90 days past maturity) averaging approximately 8%, is not quite as bad as originally expected, but more to come.
- *Transformation of the lending base* - as conduit lenders and securitized markets withdraw, an opportunity for new balance sheet or long-term lenders to enter the space. First "risk retention compliant" deal closed in August, but overall, the product continues to contract and lose market share.
- *Volatility in property prices* - national average hotel, retail, and office property prices have seen interim volatility. Multifamily valuations relative to highs, construction, and risk premium relative to benchmarks bear watching.



CWCapital Markets Update – FREMF KF Floater Performance

- In this report, we focus on the current performance of FREMF-KF transactions issued in the past four years.
- To date, we observe that no transaction is reporting a loss or delinquency, and only 1.21% of the collateral appears on the servicer’s watchlist. Cumulative interest shortfalls are less than \$1,000.**
- Performance compares favorably to a benchmark of traditional CMBS conduit transactions issued in the same period. These deals report \$134mm (0.06%) in appraisal reductions, 0.28% of the loans delinquent, 6.22% on the watchlist, and \$6mm in interest shortfall. This simple comparison helps to generally contrast performance between multifamily and other commercial collateral, and implicitly between agency and broad market lending standards.
- Subordinate floater bonds (7.50% of the deal) show a four year average spread of L+966 with a standard deviation of 125. We believe this implies approx. 13% volatility and a spread to risk ratio of 7.7x. Although not a direct comparable, BBB CMBS provides a spread to risk ratio of only 3.4x. This simple comparison highlights the spread stability of FREMF-KF subs when compared to higher in the capital stack conduit exposure in the same time period.

FREMF K Deal Floating Rate Deals

Deal Name	Issued	Orig	Curr	Watch %	Delinq	Int SF \$mm	Loss / ARA \$mm	Orig WAM	Orig WALTV	Orig WADSC	Orig WADY	Credit Support	Sub Spread
FREMF 2012-KF01	Oct-12	1,371.1	124.0	-	-	0.00	-	5.8	67.20	1.72	8.40	7.50	225
FREMF 2013-KF02	Nov-13	1,540.3	340.7	7.47%	-	-	-	5.7	70.13	1.62	8.00	7.50	975
FREMF 2014-KF03	Apr-14	1,449.1	503.5	-	-	-	-	6.3	68.80	1.84	8.30	7.50	950
FREMF 2014-KF04	Aug-14	1,363.8	766.9	-	-	-	-	6.4	70.05	1.85	8.10	7.50	819
FREMF 2014-KF05	Nov-14	1,646.3	1,264.5	4.90%	-	-	-	6.7	71.00	2.00	7.80	7.50	800
FREMF 2014-KF06	Dec-14	1,218.2	991.4	-	-	-	-	6.8	73.26	2.08	7.70	7.50	825
FREMF 2015-KF07	Apr-15	1,192.6	1,085.7	-	-	-	-	9.7	77.44	1.61	7.20	7.50	825
FREMF 2015-KF08	Jun-15	1,549.1	1,301.7	1.44%	-	-	-	6.4	73.70	1.83	7.60	7.50	810
FREMF 2015-KF09	Aug-15	1,533.6	1,354.5	-	-	-	-	6.5	73.94	1.67	7.30	7.50	865
FREMF 2015-KF10	Oct-15	1,457.0	1,321.0	-	-	-	-	6.6	72.86	1.65	7.40	7.50	915
FREMF 2015-KF11	Nov-15	1,650.6	1,537.8	4.35%	-	-	-	9.5	75.54	1.64	7.30	7.50	875
FREMF 2015-KF12	Dec-15	1,388.0	1,342.2	-	-	-	-	6.6	72.45	1.78	7.70	7.50	1065
FREMF 2016-KF13	Jan-16	875.9	875.6	2.75%	-	-	-	9.6	72.76	1.63	7.60	7.50	1050
FREMF 2016-KF14	Mar-16	1,486.4	1,421.0	0.84%	-	-	-	6.6	70.66	1.73	7.60	7.50	1115
FREMF 2016-KF15	Apr-16	1,458.9	1,458.7	2.59%	-	-	-	6.7	72.56	1.70	7.60	7.50	1125
FREMF 2016-KF16	May-16	1,161.1	1,161.0	-	-	-	-	9.7	72.86	1.66	7.70	7.50	1125
FREMF 2016-KF17	Jun-16	1,198.6	1,198.5	-	-	-	-	6.7	72.64	1.59	7.70	7.50	1075
FREMF 2016-KF18	Jul-16	1,088.0	1,088.0	-	-	-	-	9.7	70.44	1.74	7.70	7.50	1090
FREMF 2016-KF19	Aug-16	1,263.8	1,263.8	-	-	-	-	6.7	72.45	1.61	7.70	7.50	1090
Total / Avg		25,892.6	20,400.3	1.21%	-	0.00	-	7.2	72.12	1.74	7.71	7.50	966
												StDev	125
												Vol %	13.0%
												Prem	7.7

Traditional CMBS Conduit Issuance

Deal Name	Issued	Orig	Curr	Watch %	Delinq	Int SF \$mm	Loss / ARA \$mm	Orig WAM	Orig WALTV	Orig WADSC	Orig WADY	Credit Support	Sub Spread
CMBS Conduit	2012	32,164.6	29,024.9	11.65%	0.34%	1.82	13.04	9.2	63.28	1.67	10.47	6.79	559
CMBS Conduit	2013	53,123.1	50,457.3	7.44%	0.33%	2.04	48.08	9.2	63.01	1.84	10.44	7.03	382
CMBS Conduit	2014	57,354.3	56,414.2	6.75%	0.47%	1.68	66.38	9.3	65.16	1.73	10.04	7.60	345
CMBS Conduit	2015	61,948.4	61,504.5	4.42%	0.14%	0.32	6.77	9.5	64.20	1.84	10.20	7.87	422
CMBS Conduit	2016	24,996.0	24,957.1	0.69%	0.03%	0.00	-	9.4	61.01	1.87	11.14	8.09	674
Total / Avg		229,586.4	222,358.0	6.22%	0.28%	5.85	134.27	9.3	63.69	1.79	10.36	7.48	428
												StDev	127
												Vol %	29.8%
												Prem	3.4

Selected Market Data – Economic and Real Estate Fundamentals and Trends

	2006	2010	2011	2015	Q2 2016	1yr	5yr	10yr
Economic								
UNEMP	4.40	9.30	8.50	5.00	4.90	-0.4%	-1.3%	0.3%
PART	66.40	64.30	64.00	62.60	62.70	0.1%	-3.5%	-3.5%
GDP	14,066	15,230	15,785	18,165	18,437	2.92%	3.85%	3.36%
CPI-TTM	1.77%	1.15%	2.47%	1.44%	0.53%	0.73%	-3.00%	-3.30%
UST IMPL INF	2.30%	2.30%	1.96%	1.54%	1.41%	-0.46%	-1.02%	-1.20%
Interest Rate								
1M LIBOR	5.35%	0.32%	0.35%	0.43%	0.47%	0.28%	0.23%	-4.77%
Eff Fed Funds	5.24%	0.18%	0.07%	0.24%	0.40%	0.27%	0.31%	-4.59%
Prime	8.25%	3.25%	3.25%	3.37%	3.50%	0.25%	0.25%	-4.52%
UST2	4.82%	0.61%	0.25%	1.06%	0.62%	-0.02%	0.17%	-4.54%
UST10	4.71%	3.30%	1.89%	2.27%	1.50%	-0.85%	-1.68%	-3.65%
2/10 Spread	-0.11%	2.69%	1.64%	1.21%	0.88%	-0.83%	-1.85%	0.89%
Real10	2.41%	1.00%	-0.07%	0.73%	0.09%	-0.39%	-0.66%	-2.45%
Vacancy (REIS)								
Multi	5.80%	6.60%	5.30%	4.40%	4.50%	0.10%	-0.30%	-2.20%
Retail	7.10%	11.00%	11.00%	10.00%	9.90%	-0.10%	-0.90%	1.00%
Office	13.40%	17.60%	17.40%	16.20%	16.00%	-0.20%	-1.30%	1.50%
Industrial	n/a	14.00%	13.20%	10.60%	10.50%	-0.10%	-2.20%	n/a
Hotel								
Rents (REIS Effective)								
Multi	930	987	1,010	1,183	1,201	4.25%	3.76%	2.91%
Retail	17.16	16.51	16.50	17.54	\$17.72	2.13%	1.48%	0.33%
Office	22.21	22.09	22.54	24.97	\$25.37	3.09%	2.51%	1.42%
Industrial	n/a	4.21	4.19	4.55	\$4.60	2.45%	1.96%	n/a
Hotel								
National \$PSF (RCA)								
Multi	113,416	99,503	103,330	148,228	144,135	16.6%	11.0%	6.1%
Retail	174	152	175	213	227	6.3%	10.8%	4.6%
Office	232	222	213	239	278	16.5%	8.3%	3.9%
Industrial	67	51	60	73	80	14.0%	8.7%	1.6%
Hotel	136,505	138,350	98,187	138,162	159,800	-6.0%	1.6%	2.6%
National Cap Rate (RCA)								
MF	6.23%	6.55%	6.26%	5.91%	5.82%	-0.16%	-0.65%	-0.54%
Ret	6.66%	7.61%	7.41%	6.48%	6.52%	-0.05%	-1.04%	-0.20%
Office	6.69%	7.57%	7.32%	6.70%	6.71%	-0.08%	-0.76%	-0.18%
Ind	7.14%	8.23%	7.69%	6.61%	6.80%	-0.11%	-1.01%	-0.31%
Hotel	8.92%	8.21%	7.94%	8.38%	8.47%	0.28%	0.48%	-0.43%
Risk Premium								
MF	1.52%	3.25%	4.37%	3.64%	4.32%	0.69%	1.03%	3.11%
Ret	1.95%	4.31%	5.52%	4.21%	5.02%	0.80%	0.64%	3.45%
Office	1.98%	4.27%	5.43%	4.43%	5.21%	0.77%	0.92%	3.47%
Ind	2.43%	4.93%	5.80%	4.34%	5.30%	0.74%	0.67%	3.34%
Hotel	4.21%	4.91%	6.05%	6.11%	6.97%	1.13%	2.16%	3.22%



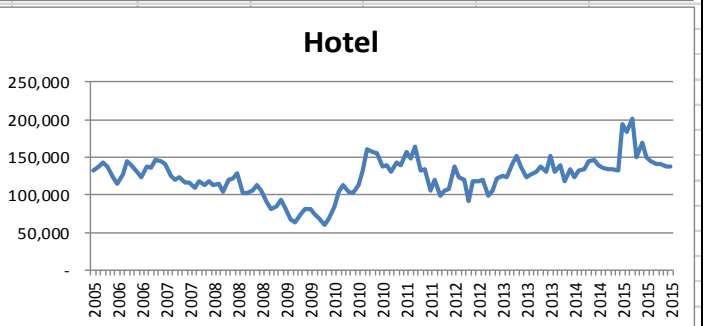
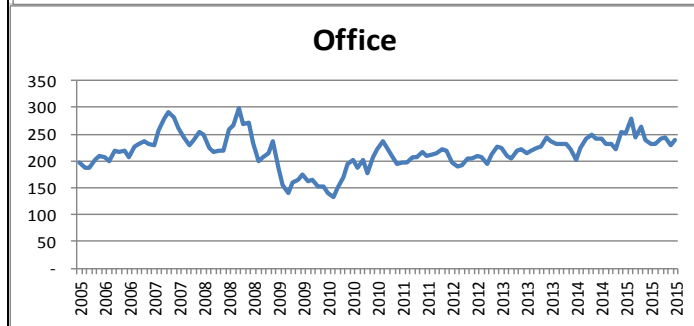
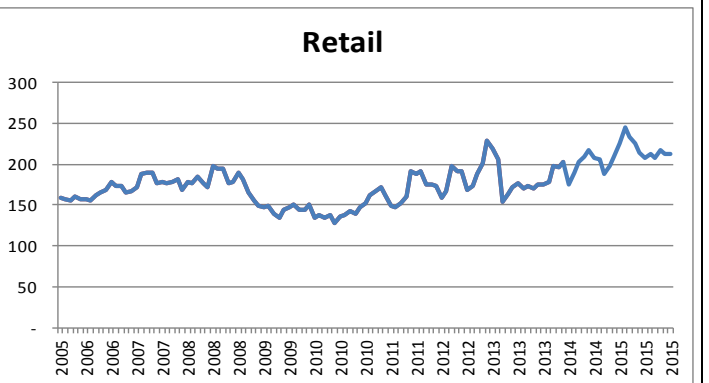
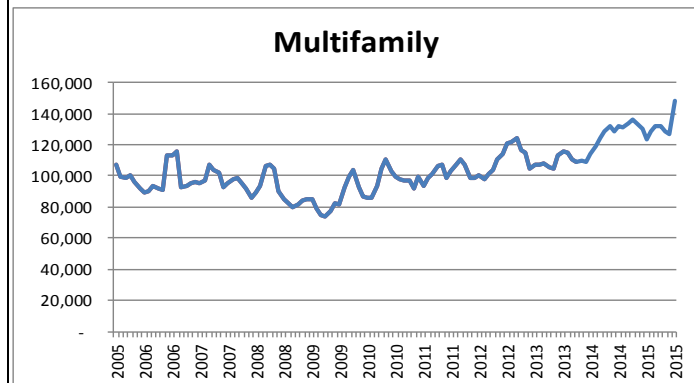
CRE Fundamentals – Property Price, Fundamentals, and Trends

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
Q2 2016	144,135.0	226.9	159,800.0	277.5	80.0
Peak	162,671.2	244.8	201,238.3	298.5	80.0
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	Mar-15	Apr-15	Aug-08	Jun-16
Trough Date	Sep-09	Jun-10	Dec-09	Mar-10	Apr-10
Curr vs '06	27.1%	30.2%	17.1%	19.4%	19.9%
Curr vs Pk	-11.4%	-7.3%	-20.6%	-7.0%	0.0%
Curr vs Tr	95.3%	77.2%	170.8%	110.2%	79.1%

5yr GR	8.3%	6.9%	0.0%	1.5%	7.2%
10yr GR	3.3%	3.0%	0.4%	1.9%	1.6%
Volatility	12.7%	13.8%	33.6%	18.7%	11.8%

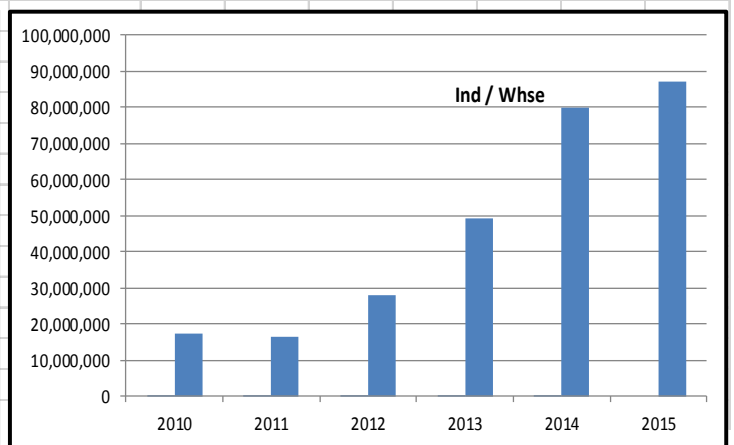
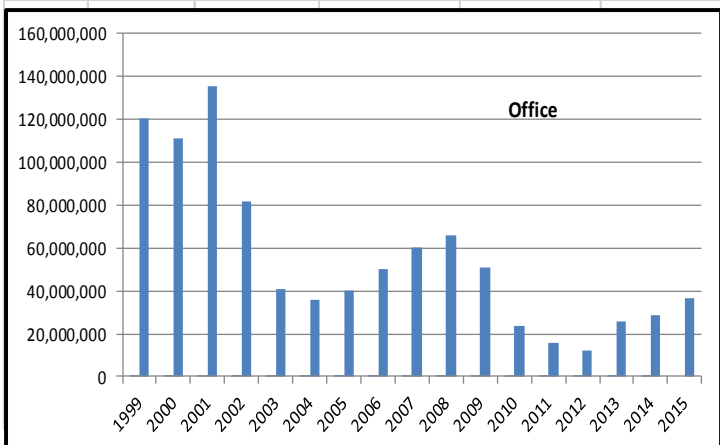
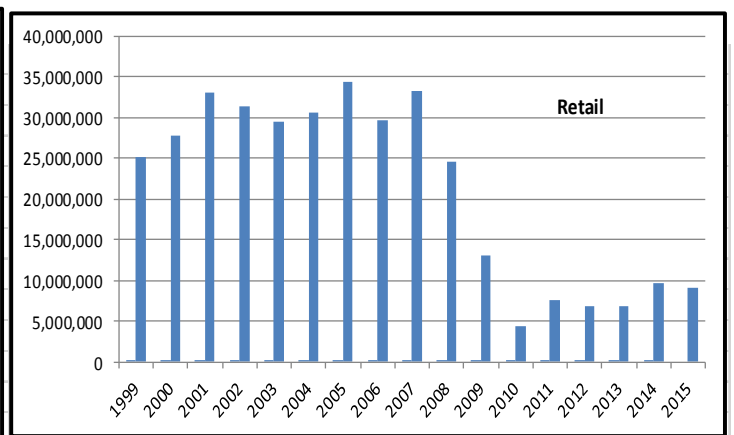
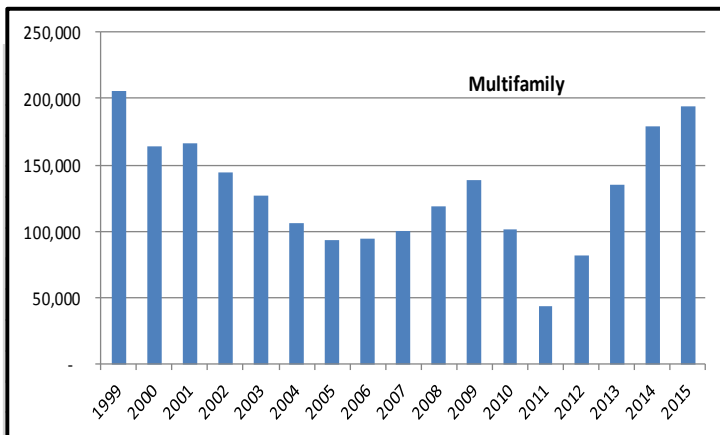
Year End	Vacancy Trend				
	MF	Retail	Hotel	Ofc	Ind
2005	5.70	6.80	-	14.70	-
2006	5.80	7.10	-	13.40	-
2007	5.70	7.50	-	12.60	-
2008	6.70	8.90	-	14.50	-
2009	8.00	10.60	-	17.00	-
2010	6.60	11.00	-	17.60	14.00
2011	5.30	11.00	-	17.40	13.20
2012	4.60	10.70	-	17.10	12.10
2013	4.30	10.40	-	16.90	11.60
2014	4.20	10.20	-	16.70	11.20
2015	4.40	10.00	-	16.20	10.60
Q2 2016	4.50	9.90	-	16.00	10.50

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



CRE Fundamentals – New Construction and Delivery Trends

Year	Multi	Retail	Hotel	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	-	* Multifamily deliveries and supply continued growth
2002	143,957	31,369,000	-	81,422,000	-	
2003	127,591	29,416,000	-	41,016,000	-	* Continued slow growth of retail and office product remains at levels near post crisis levels
2004	106,144	30,596,000	-	35,475,000	-	
2005	93,227	34,438,000	-	39,792,000	-	
2006	95,205	29,627,000	-	49,879,000	-	* Significant deliveries of industrial and warehouse space
2007	100,630	33,254,000	-	59,902,000	-	
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	
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	
2014	179,358	9,776,000	-	28,287,000	80,009,000	
2015	194,459	9,088,000	-	36,642,000	86,962,000	
1Q 2016	44,387	2,057,000	-	7,680,000	17,801,000	
2Q 2016	49,132	1,403,000	-	8,608,000	16,602,000	





Securitized Markets - 2016 CMBS Conduit Issuance

PRICING	SHELF	SERIES	AMOUNT	SPSERV	B-PIECE	#PROP	#LOAN	LCF	AAA	BBB
01/22/16	CFCRE	2016-C3	703.55	CWCAM	Seer Capital	67	38	162	725	
01/26/16	CSAIL	2016-C5	936.42	Rialto Capital	Rialto Capital	241	59	155	-	
01/27/16	COMM	2016-CCRE28	1,026.80	Midland	KKR	119	49	155	830	
02/03/16	CGCMT	2016-GC36	1,155.94	Wells Fargo	Eightfold	104	58	157	750	
02/03/16	WFCMT	2016-C32	959.98	Rialto Capital	Rialto Capital	152	112	151	750	
02/12/16	MSBAM	2016-C28	955.65	C-III Asset Mgt	C-III Capital	161	42	165	725	
02/18/16	WFCMT	2016-NXS5	875.13	Rialto Capital	Rialto Capital	116	64	165	925	
02/19/16	MSCI	2016-UBS9	666.61	CWCAM	Ellington	222	31	165	650	
02/23/16	JPMCC	2016-C1	1,021.91	Midland	Eightfold	110	50	166	-	
03/03/16	COMM	2016-DC2	806.20	CWCAM	Seer Capital	91	64	173	825	
03/18/16	WFCMT	2016-C33	712.20	Rialto / NCB	Rialto Capital	104	79	138	700	
03/29/16	CGCMT	2016-P3	770.97	C-III Asset Mgt	Raith	75	37	132	600	
03/31/16	DBJPM	2016-C1	818.03	Midland	Eightfold	45	33	129	600	
04/13/16	CGCMT	2016-GC37	694.73	Midland	Eightfold	64	54	134	700	
04/22/16	MSBAM	2016-C29	809.46	Rialto Capital	Rialto Capital	106	69	125	660	
05/04/16	CFCRE	2016-C4	840.00	Rialto Capital	Rialto Capital	154	50	130	-	
05/04/16	JPMDB	2016-C2	892.80	Midland	Blackrock	79	30	117	625	
05/10/16	WFCMT	2016-C34	702.80	LNR Partners	Prime / LNR	92	68	117	720	
05/18/16	CGCMT	2016-C1	755.70	LNR Partners	Prime / LNR	130	54	125	-	
05/18/16	CSAIL	2016-C6	767.50	Torchlight	Torchlight	363	50	113	-	
05/18/16	GSMS	2016-GS2	750.60	Torchlight	Torchlight	115	37	110	565	
05/20/16	BACM	2016-UBS10	876.30	Rialto Capital	Rialto Capital	84	52	114	660	
06/10/16	LNSTR	2016-4	506.30	Hudson Adv	Lone Star Funds	26	22	175	-	
07/01/16	SOCGEN	2016-C5	736.81	Rialto Capital	Rialto Capital	138	47	138	760	
07/08/16	JPMCC	2016-JP2	939.20	LNR Partners	LNR / Och Ziff	78	47	122	600	
07/14/16	CITI	2016-P4	721.16	CWCAM	Eightfold	64	45	118	-	
07/15/16	WFCMT	2016-C35	1,022.88	CWCAM	Basis Inv Grp	140	102	115	600	
07/26/16	DBJPM	2016-C3	893.74	Midland	BlackRock	54	32	108	-	
08/04/16	WFCMT	2016-BNK1	870.56	Rialto Capital	Rialto Capital	46	40	94	425	
08/10/16	CD	2016-CD1	703.22	Rialto Capital	Rialto Capital	58	32	100	485	
08/11/16	CITI	2016-C2	609.17	C-III Asset Mgt	C-III Capital	53	44	106	515	
08/12/16	MSCI	2016-UBS11	719.76	CWCAM	Ellington / Prime	75	38	105	485	
09/14/16	WFCMT	2016-LC24	1,045.36	Midland	Prime / Ellington	128	91	108	625	
			27,267.43							



Securitized Markets - 2016 FREMF Agency Issuance

PRICING	SHELF	SERIES	AMOUNT	SPSERV	B-PIECE	#PROP	#LOAN	LCF AAA	BBB
01/15/16	<u>5 Year</u>	2016-K504	587.41	CWCAM	Providnc / Benefit	22	22	55	-
06/22/16	<u>7 Year</u>	2016 K722	949.78	Midland	Related Cos.	52	52	60	-
01/27/16	<u>10 Year</u>	2016-K52	1,395.79	CWCAM	Torchlight	96	91	90	650
03/21/16	"	2016-K53	1,447.25	Wells Fargo	Berkshire Group	88	88	85	-
04/06/16	"	2016-K54	1,423.01	Midland	Related Cos.	79	79	80	625
06/08/16	"	2016-K55	1,036.96	Wells Fargo	Carmel Partners	78	78	77	-
07/26/16	"	2016-K56	1,015.09	Midland	Torchlight	82	82	73	-
09/14/16	"	2016-K57	1,040.48	KeyBank	Berkshire Group	72	72	70	-
06/01/16	<u>15 Year</u>	2016-K1502	619.13	CWCAM	AngGordn, McDowell	59	59	92	-
04/12/16	<u>Seasoned</u>	2016-KP03	974.04	Freddie Mac	Berkeley Point	40	40	45	-
01/05/16	<u>Floating</u>	2016-KF13	875.88	CWCAM	Harbor Group	48	48	76	-
03/03/16	"	2016-KF14	1,486.41	Wells Fargo	Bridge Invest	83	83	65	-
04/13/16	"	2016-KF15	1,458.92	CWCAM	Kayne Anderson	67	67	-	-
05/03/16	"	2016-KF16	1,045.02	Wells Fargo	Bridge Inv Grp	69	69	63	-
06/15/16	"	2016-KF17	1,078.78	KeyBank	Harbor Group	56	56	55	-
07/13/16	"	2016-KF18	1,088.04	Wells Fargo	Bridge Inv Grp	41	41	52	-
08/02/16	"	2016-KF19	1,263.79	CWCAM	Kayne Anderson	66	66	45	-
09/08/16	"	2016-KF20	1,090.31	Wells Fargo	Bridge Inv Grp	48	48	43	-
09/15/16	"	2016-KF21	1,192.88	CWCAM	Kayne Anderson	83	83	-	-
01/14/16	<u>Small Bal</u>	2016-SB11	109.97	KeyBank	Sutherland	55	55	130	-
02/04/16	"	2016-SB12	167.02	Centerline	Axonic Capital	67	67	115	-
02/25/16	"	2016-SB13	400.89	Arbor	Axonic Capital	160	160	105	-
03/17/19	"	2016-SB14	309.78	CBRE / Sabal	CBRE / Sabal	115	115	100	-
04/13/16	"	2016-SB15	301.63	Arbor	Arbor / Greystone	117	117	90	-
05/12/16	"	2016-SB16	314.55	Red Mtg Capital	Axonic Capital	154	154	-	-
06/08/16	"	2016-SB17	347.74	Hunt Mortgage	Axonic Capital	165	165	-	-
07/12/16	"	2016-SB18	118.00	KeyBank	Sutherland	58	58	100	-
07/21/16	"	2016-SB19	264.50	Situs	First Foundation	84	84	120	-
08/02/16	"	2016-SB20	298.10	Greystone	Axonic Capital	119	119	115	-
09/13/16	"	2016-SB21	94.00	KeyBank	Axonic Capital	37	37	-	-
02/04/16	<u>Jr Lien</u>	2016-KJ03	316.30	KeyBank	Berkshire Group	38	43	115	-
05/11/16	"	2016-KJ04	238.39	Wells Fargo	Ares Mgt	57	63	53	-
06/17/16	"	2016-KJ05	217.60	KeyBank	Berkshire Group	54	58	60	560
07/18/16	"	2016-KJ06	109.90	Berkadia		10	10	75	-
09/13/16	"	2016-KJ07	209.30	Wells Fargo	Waterton Assoc	32	32	-	-
01/22/16	<u>Single Borr</u>	2016-KBAM	841.00	Wells Fargo	Principal	27	27	70	-
02/11/16	"	2016-KLH1	1,493.67	Trimont	Annaly Capital	28	28	70	-
03/09/16	"	2016-KLH2	1,379.82	Situs	Canada Pension	26	26	70	-
04/01/16	"	2016-KLH3	1,341.45	Situs	CPPIB	27	27	70	-
04/19/16	Reduced Call	2016-KC01	83.22	Wells Fargo	Berkshire Group	27	27	73	-
05/18/16	Workforce	2016-KW01	608.57	Wells Fargo	Ares Mgt	89	89	80	-
07/19/16	Senior Housing	2016-KS05	1,411.00	KeyBank	Kayne Anderson	96	96	50	-
08/12/16	Mixed	2016-KX02	715.00	KeyBank	Harbor Group	54	54	72	-
			32,760.34						

(Commercial Mortgage Alert, CitiBank Research)



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

Olasav Conway Appraisal Study 2012

Real Capital Analytics

REIS

Trepp Information Systems

US Bureau of Labor Statistics

US Federal Reserve

US Treasury

Wells Fargo Research

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