

# FNMA Prepayment Speeds

July 2017

FNMA 10yr

	Indicative Data							Prepayment Speeds						
	Cur Bal (MM)	Factor	# of Pools	WAC	WAM	WALA	WAOLS	Jul	Jun	Chg	% Chg	3mo	6mo	12mo
<b>FNMA 10yr 2</b>	3,994	0.456	179	2.7	73	42	223,883	<b>11.5</b>	13.4	-1.9	<b>-14%</b>	12.40	11.11	11.02
2016	761	0.868	28	2.6	107	11	253,742	<b>7.6</b>	11.1	-3.5	<b>-32%</b>	8.99	7.16	6.09
2015	117	0.684	19	2.7	91	25	237,805	<b>14.8</b>	7.1	7.7	<b>108%</b>	10.97	8.59	9.75
2014	111	0.580	16	2.9	83	33	225,986	<b>9.0</b>	9.9	-0.9	<b>-9%</b>	8.64	10.10	9.87
2013	2,451	0.415	83	2.7	65	50	219,147	<b>12.5</b>	14.3	-1.8	<b>-12%</b>	13.17	12.06	11.80
2012	543	0.339	30	2.7	59	56	199,854	<b>12.6</b>	14.9	-2.3	<b>-16%</b>	14.61	12.84	13.14
<b>FNMA 10yr 2.5</b>	18,144	0.461	575	3.0	81	35	218,539	<b>12.1</b>	13.4	-1.3	<b>-10%</b>	12.55	11.56	12.16
2017	406	0.964	7	3.0	115	3	238,133	<b>7.1</b>	6.7	0.5	<b>7%</b>	6.42	-	-
2016	4,934	0.857	44	2.9	106	11	235,645	<b>8.3</b>	9.3	-1.0	<b>-11%</b>	8.50	7.39	7.12
2015	3,017	0.655	54	3.0	91	25	216,226	<b>12.8</b>	13.0	-0.2	<b>-2%</b>	12.47	11.22	12.14
2014	1,983	0.502	65	3.2	79	36	211,013	<b>13.1</b>	17.1	-3.9	<b>-23%</b>	14.47	13.29	14.36
2013	3,143	0.389	146	3.0	65	50	194,233	<b>13.7</b>	14.3	-0.6	<b>-4%</b>	13.97	13.34	13.60
2012	4,432	0.289	227	3.0	56	60	220,839	<b>14.2</b>	16.0	-1.8	<b>-11%</b>	15.08	14.06	14.22
2011	230	0.196	32	3.1	48	68	200,096	<b>19.7</b>	17.7	2.0	<b>11%</b>	18.37	16.91	16.53
<b>FNMA 10yr 3</b>	10,379	0.291	531	3.5	72	44	187,802	<b>14.5</b>	15.2	-0.7	<b>-5%</b>	14.95	14.22	14.82
2017	1,094	0.954	11	3.4	114	4	212,806	<b>7.3</b>	8.3	-1.0	<b>-12%</b>	8.13	6.35	-
2016	1,184	0.827	23	3.5	104	12	175,379	<b>12.1</b>	11.4	0.7	<b>6%</b>	11.19	9.32	9.41
2015	1,244	0.662	31	3.5	91	24	173,203	<b>13.5</b>	15.5	-2.0	<b>-13%</b>	14.41	13.29	13.05
2014	1,225	0.488	46	3.6	78	36	166,612	<b>14.1</b>	15.8	-1.7	<b>-11%</b>	14.99	14.63	15.32
2013	1,162	0.389	109	3.6	68	47	162,025	<b>13.4</b>	16.3	-2.9	<b>-18%</b>	14.93	14.16	14.50
2012	1,363	0.234	184	3.5	52	63	180,631	<b>16.9</b>	16.8	0.1	<b>1%</b>	16.62	15.96	16.23
2011	2,699	0.165	101	3.5	45	70	212,589	<b>17.8</b>	16.9	0.8	<b>5%</b>	17.67	16.76	17.01
2010	408	0.114	26	3.6	37	80	198,288	<b>16.3</b>	16.3	0.0	<b>0%</b>	17.14	17.14	17.24
<b>FNMA 10yr 3.5</b>	3,007	0.152	266	4.0	58	57	169,659	<b>15.7</b>	17.8	-2.1	<b>-12%</b>	16.97	16.68	17.02
2017	425	0.961	9	3.9	114	3	170,036	<b>5.5</b>	4.6	0.9	<b>*n.m.</b>	5.88	4.86	-
2016	118	0.822	12	4.0	103	13	130,164	<b>11.8</b>	13.6	-1.8	<b>-13%</b>	12.76	10.14	8.97
2015	95	0.645	15	4.2	90	24	112,889	<b>13.1</b>	15.9	-2.8	<b>-17%</b>	15.41	16.46	14.40
2014	253	0.468	21	4.2	75	37	127,008	<b>14.3</b>	15.9	-1.7	<b>-11%</b>	15.23	14.70	15.27
2013	219	0.384	25	4.1	68	46	125,847	<b>13.5</b>	20.2	-6.7	<b>-33%</b>	15.99	15.23	15.59
2012	85	0.227	36	4.1	52	63	118,981	<b>17.7</b>	21.5	-3.8	<b>-18%</b>	18.86	18.17	18.63
2011	826	0.137	82	4.0	41	75	176,244	<b>18.8</b>	19.2	-0.4	<b>-2%</b>	18.76	18.22	17.79
2010	984	0.086	59	3.9	35	82	199,295	<b>18.5</b>	21.2	-2.7	<b>-13%</b>	20.16	19.10	19.00
<b>FNMA 10yr 4</b>	744	0.052	191	4.4	31	86	156,130	<b>19.5</b>	22.5	-3.0	<b>-14%</b>	21.11	20.87	20.46
2011	135	0.129	37	4.4	41	75	137,517	<b>14.0</b>	15.7	-1.8	<b>-11%</b>	17.02	17.47	17.47
2010	331	0.063	51	4.4	31	86	160,651	<b>21.0</b>	22.5	-1.4	<b>-6%</b>	21.55	20.82	20.35
2009	251	0.034	65	4.5	23	95	169,435	<b>20.9</b>	26.4	-5.5	<b>-21%</b>	23.17	22.85	22.30
<b>FNMA 10yr 4.5</b>	86	0.024	111	4.9	23	95	133,228	<b>24.3</b>	22.6	1.6	<b>7%</b>	22.32	23.08	23.08
2009	53	0.033	48	4.9	22	96	136,999	<b>23.3</b>	22.1	1.3	<b>6%</b>	21.82	22.81	22.51

\*n.m. - Not Meaningful

Source: Bloomberg

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# FNMA Prepayment Speeds

July 2017

FNMA 15yr

	Indicative Data							Prepayment Speeds						
	Cur Bal (MM)	Factor	# of Pools	WAC	WAM	WALA	WAOLS	Jul	Jun	Chg	% Chg	3mo	6mo	12mo
<b>FNMA 15yr 2</b>	21,120	0.656	1641	2.6	138	38	279,874	<b>7.7</b>	8.4	-0.6	<b>-8%</b>	7.83	6.86	7.29
2017	17	0.976	6	2.6	174	6	244,479	<b>0.6</b>	0.5	0.0	<b>*n.m.</b>	0.48	0.65	-
2016	7,129	0.920	274	2.6	167	11	297,596	<b>5.0</b>	5.0	0.0	<b>*n.m.</b>	4.68	3.91	3.95
2015	827	0.771	134	2.8	150	26	289,707	<b>9.4</b>	6.9	2.5	<b>35%</b>	7.66	7.53	7.80
2014	98	0.703	23	2.8	141	33	258,817	<b>5.1</b>	6.2	-1.1	<b>-17%</b>	5.86	6.90	9.44
2013	8,469	0.579	811	2.6	124	51	274,492	<b>9.3</b>	10.6	-1.2	<b>-12%</b>	9.75	8.41	8.49
2012	4,571	0.533	388	2.6	118	56	261,267	<b>8.7</b>	9.6	-0.9	<b>-9%</b>	9.08	8.26	8.81
<b>FNMA 15yr 2.5</b>	163,808	0.625	11495	3.0	140	35	267,784	<b>8.9</b>	9.8	-0.9	<b>-9%</b>	9.19	8.06	9.33
2017	2,617	0.972	152	3.0	174	4	288,564	<b>4.3</b>	3.9	0.4	<b>*n.m.</b>	3.59	3.04	-
2016	54,412	0.900	2268	2.9	166	11	279,103	<b>6.5</b>	6.9	-0.4	<b>-6%</b>	6.42	5.34	5.75
2015	21,449	0.731	1462	3.0	151	25	274,006	<b>9.5</b>	11.0	-1.6	<b>-14%</b>	9.86	8.51	11.06
2014	5,740	0.624	798	3.1	142	33	270,631	<b>11.3</b>	13.0	-1.7	<b>-13%</b>	12.29	10.57	13.35
2013	32,975	0.554	2774	2.9	123	51	248,206	<b>10.2</b>	10.9	-0.7	<b>-6%</b>	10.45	9.40	9.95
2012	45,605	0.465	3901	3.0	115	59	264,613	<b>10.5</b>	11.6	-1.0	<b>-9%</b>	10.94	9.77	10.85
2011	994	0.377	137	3.1	104	69	238,687	<b>13.0</b>	12.0	1.0	<b>9%</b>	12.47	11.37	11.93
<b>FNMA 15yr 3</b>	134,125	0.540	15612	3.5	139	36	231,999	<b>10.7</b>	11.7	-1.0	<b>-8%</b>	11.20	10.22	12.15
2017	18,095	0.971	920	3.4	175	4	272,752	<b>6.1</b>	6.0	0.1	<b>2%</b>	5.97	4.69	-
2016	16,797	0.878	1761	3.5	164	12	216,577	<b>8.7</b>	9.0	-0.3	<b>-3%</b>	8.57	7.26	7.70
2015	24,959	0.731	2434	3.5	152	24	230,583	<b>11.2</b>	11.9	-0.7	<b>-6%</b>	11.40	10.09	11.70
2014	20,275	0.581	2352	3.5	139	36	228,860	<b>12.5</b>	13.9	-1.4	<b>-10%</b>	13.08	11.75	14.15
2013	16,729	0.514	2524	3.5	127	47	214,216	<b>12.7</b>	13.7	-1.0	<b>-7%</b>	13.05	11.73	13.36
2012	19,872	0.393	3898	3.5	111	62	212,531	<b>11.4</b>	12.8	-1.4	<b>-11%</b>	12.32	11.40	12.66
2011	15,208	0.310	1430	3.4	104	69	252,439	<b>11.8</b>	12.8	-1.0	<b>-8%</b>	12.25	11.43	13.24
2010	2,190	0.236	290	3.6	93	80	229,443	<b>12.1</b>	13.6	-1.5	<b>-11%</b>	12.65	12.20	13.90
<b>FNMA 15yr 3.5</b>	48,721	0.341	11098	4.0	123	51	184,397	<b>12.2</b>	13.0	-0.9	<b>-7%</b>	12.76	12.11	13.64
2017	5,962	0.974	665	4.0	174	4	182,878	<b>5.0</b>	5.1	-0.1	<b>-2%</b>	4.55	3.50	-
2016	2,632	0.869	600	4.0	161	13	130,745	<b>11.4</b>	10.9	0.5	<b>4%</b>	10.34	8.80	7.69
2015	3,580	0.740	1012	4.0	150	24	138,409	<b>13.1</b>	14.3	-1.2	<b>-9%</b>	13.33	12.16	12.03
2014	6,919	0.570	1736	4.1	137	37	163,276	<b>13.3</b>	15.0	-1.7	<b>-11%</b>	14.27	13.09	13.96
2013	5,793	0.499	1370	4.0	128	46	175,490	<b>13.1</b>	13.8	-0.7	<b>-5%</b>	13.94	12.87	14.13
2012	2,836	0.375	1600	4.0	109	63	151,144	<b>12.5</b>	14.3	-1.8	<b>-13%</b>	13.62	13.05	13.86
2011	9,896	0.267	2290	3.9	100	72	204,206	<b>13.0</b>	14.3	-1.2	<b>-9%</b>	13.77	12.85	14.46
2010	10,922	0.186	1588	3.9	92	81	221,788	<b>13.7</b>	13.4	0.3	<b>2%</b>	13.85	13.22	15.08
2009	166	0.130	146	4.0	76	96	200,415	<b>14.5</b>	18.2	-3.6	<b>-20%</b>	15.47	15.37	15.37
<b>FNMA 15yr 4</b>	17,539	0.101	8286	4.4	89	84	181,962	<b>14.2</b>	15.8	-1.6	<b>-10%</b>	15.14	14.77	16.15
2017	439	0.974	53	4.4	170	4	149,767	<b>4.9</b>	6.7	-1.9	<b>-28%</b>	5.58	3.43	-
2014	187	0.572	143	4.6	131	39	84,014	<b>14.3</b>	15.1	-0.8	<b>-5%</b>	14.17	14.07	13.24
2013	345	0.539	217	4.6	127	45	99,692	<b>16.0</b>	14.5	1.5	<b>11%</b>	15.13	13.69	13.61
2012	222	0.348	290	4.5	108	64	117,880	<b>17.5</b>	14.4	3.1	<b>22%</b>	15.90	15.32	14.99
2011	4,836	0.218	1856	4.4	98	75	173,551	<b>14.0</b>	15.2	-1.2	<b>-8%</b>	14.69	14.14	15.38
2010	5,890	0.134	1892	4.4	88	85	188,735	<b>13.6</b>	15.7	-2.1	<b>-13%</b>	14.69	14.36	16.12
2009	4,977	0.079	1634	4.5	77	96	198,027	<b>14.6</b>	16.3	-1.7	<b>-11%</b>	15.59	15.10	16.40
2008	128	0.053	188	4.6	65	109	193,330	<b>14.2</b>	14.2	0.0	<b>0%</b>	14.68	16.20	17.64
<b>FNMA 15yr 4.5</b>	6,763	0.029	11029	4.9	65	110	165,905	<b>18.1</b>	19.0	-0.8	<b>-4%</b>	18.62	18.26	18.68
2011	691	0.232	697	4.8	98	75	140,758	<b>15.6</b>	16.4	-0.8	<b>-5%</b>	15.52	14.99	16.24
2010	1,340	0.143	884	4.8	86	87	154,068	<b>14.7</b>	15.5	-0.9	<b>-6%</b>	15.30	15.64	16.36
2009	2,248	0.082	1405	4.9	77	96	171,489	<b>16.1</b>	17.0	-1.0	<b>-6%</b>	16.48	15.66	16.75
2008	731	0.031	708	5.1	63	111	191,589	<b>16.7</b>	14.5	2.2	<b>15%</b>	16.07	15.89	16.49
<b>FNMA 15yr 5</b>	2,875	0.012	12359	5.5	41	136	155,502	<b>21.2</b>	21.6	-0.4	<b>-2%</b>	21.62	20.97	20.43
2010	55	0.180	134	5.4	86	87	125,189	<b>10.6</b>	12.0	-1.4	<b>-11%</b>	13.06	13.78	13.91
2009	175	0.116	407	5.5	78	96	120,372	<b>12.8</b>	12.7	0.2	<b>1%</b>	13.67	14.34	14.31
2008	687	0.038	901	5.6	65	110	164,439	<b>15.6</b>	15.7	-0.1	<b>-1%</b>	16.48	15.63	15.98
2007	251	0.031	551	5.7	56	120	172,444	<b>17.1</b>	14.5	2.6	<b>18%</b>	15.56	16.66	16.89

\*n.m. - Not Meaningful

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# FNMA Prepayment Speeds

July 2017

FNMA 20yr

	Indicative Data							Prepayment Speeds						
	Cur Bal (MM)	Factor	# of Pools	WAC	WAM	WALA	WAOLS	Jul	Jun	Chg	% Chg	3mo	6mo	12mo
<b>FNMA 20yr 2.5</b>	7,009	0.800	182	3.2	212	25	281,923	<b>5.7</b>	6.5	-0.8	<b>-12%</b>	5.72	4.71	6.12
2017	13	0.982	2	3.4	232	6	264,434	<b>0.5</b>	1.2	-0.7	<b>*n.m.</b>	0.71	-	-
2016	4,520	0.948	39	3.2	229	10	299,705	<b>5.0</b>	5.1	-0.2	<b>-3%</b>	4.54	3.47	2.40
2015	64	0.730	11	3.3	210	28	287,748	<b>2.6</b>	10.1	-7.5	<b>-75%</b>	5.85	6.99	13.10
2013	973	0.642	50	3.3	183	52	260,274	<b>7.5</b>	9.1	-1.6	<b>-18%</b>	8.43	7.18	9.96
2012	1,424	0.604	75	3.2	177	56	240,529	<b>7.1</b>	8.7	-1.6	<b>-18%</b>	7.59	6.77	9.39
<b>FNMA 20yr 3</b>	61,661	0.709	1700	3.6	204	32	263,622	<b>8.7</b>	9.3	-0.6	<b>-7%</b>	8.65	7.33	9.88
2017	1,625	0.987	34	3.7	236	3	274,857	<b>2.5</b>	4.0	-1.5	<b>*n.m.</b>	2.71	1.57	-
2016	22,361	0.929	246	3.6	227	11	284,153	<b>6.4</b>	6.8	-0.5	<b>-7%</b>	6.11	4.73	4.69
2015	10,369	0.765	151	3.8	213	25	270,661	<b>10.2</b>	11.0	-0.9	<b>-8%</b>	10.07	8.59	12.16
2014	1,936	0.624	71	3.9	203	33	255,548	<b>13.7</b>	12.7	1.1	<b>8%</b>	12.57	10.61	16.93
2013	11,147	0.618	553	3.6	183	51	232,708	<b>9.9</b>	10.6	-0.7	<b>-6%</b>	10.20	8.94	10.88
2012	14,072	0.538	621	3.6	176	59	250,458	<b>10.2</b>	10.7	-0.5	<b>-5%</b>	10.15	8.95	11.89
2011	132	0.427	19	3.6	165	68	234,784	<b>11.9</b>	17.4	-5.5	<b>-32%</b>	13.95	11.05	15.05
<b>FNMA 20yr 3.5</b>	34,460	0.515	2322	4.1	194	42	231,595	<b>11.1</b>	11.9	-0.7	<b>-6%</b>	11.29	10.28	14.49
2017	4,743	0.977	126	4.0	235	4	261,182	<b>5.5</b>	4.2	1.3	<b>*n.m.</b>	4.50	2.94	-
2016	2,913	0.910	136	4.0	228	11	239,522	<b>9.4</b>	9.8	-0.4	<b>-5%</b>	8.74	6.73	8.67
2015	4,249	0.750	361	4.1	212	25	216,848	<b>13.4</b>	13.8	-0.4	<b>-3%</b>	13.47	11.28	13.51
2014	4,035	0.560	213	4.2	200	36	230,862	<b>14.9</b>	14.9	0.0	<b>0%</b>	14.58	13.20	18.36
2013	4,482	0.557	486	4.1	187	48	205,978	<b>11.2</b>	12.8	-1.7	<b>-13%</b>	11.90	11.35	14.18
2012	7,648	0.446	748	4.0	171	62	230,007	<b>11.3</b>	12.6	-1.3	<b>-11%</b>	11.92	11.01	14.51
2011	5,077	0.327	202	4.0	165	69	239,582	<b>11.8</b>	12.4	-0.7	<b>-5%</b>	11.86	10.83	15.93
2010	1,312	0.247	47	4.0	153	80	223,010	<b>11.1</b>	13.4	-2.3	<b>-17%</b>	12.25	11.55	16.09
<b>FNMA 20yr 4</b>	18,218	0.354	1635	4.5	189	47	208,537	<b>12.2</b>	12.3	-0.2	<b>-1%</b>	12.49	12.01	15.26
2017	3,019	0.983	139	4.5	236	3	233,462	<b>4.8</b>	4.2	0.6	<b>*n.m.</b>	3.75	2.51	-
2016	1,160	0.876	132	4.4	225	13	208,416	<b>12.6</b>	13.3	-0.6	<b>-5%</b>	12.65	10.46	9.40
2015	1,768	0.750	285	4.4	213	24	185,275	<b>14.2</b>	12.4	1.8	<b>15%</b>	13.67	12.48	13.77
2014	2,951	0.599	285	4.7	199	37	190,622	<b>13.3</b>	14.2	-0.9	<b>-6%</b>	14.43	13.71	15.64
2013	1,513	0.538	201	4.7	191	45	182,161	<b>14.9</b>	12.7	2.2	<b>18%</b>	13.47	12.70	15.14
2012	584	0.426	185	4.5	170	63	196,387	<b>13.4</b>	13.6	-0.2	<b>-1%</b>	15.06	13.37	15.41
2011	2,905	0.292	192	4.5	162	72	216,008	<b>13.5</b>	13.9	-0.5	<b>-3%</b>	13.91	13.09	16.69
2010	3,612	0.189	127	4.4	152	81	221,996	<b>13.8</b>	13.6	0.3	<b>2%</b>	13.34	12.84	17.36
2009	689	0.108	65	4.5	134	97	203,245	<b>10.8</b>	14.9	-4.1	<b>-28%</b>	13.82	13.21	16.56
<b>FNMA 20yr 4.5</b>	5,086	0.130	518	4.9	143	90	197,089	<b>14.1</b>	16.2	-2.1	<b>-13%</b>	15.01	14.53	17.42
2017	47	0.975	14	5.0	236	4	132,421	<b>6.8</b>	0.4	6.4	<b>*n.m.</b>	10.49	7.95	-
2014	94	0.618	35	5.2	196	40	138,920	<b>12.6</b>	15.3	-2.7	<b>-18%</b>	14.88	13.71	14.32
2013	80	0.549	24	5.2	190	45	148,625	<b>5.8</b>	7.2	-1.4	<b>-19%</b>	7.28	12.81	14.92
2011	1,362	0.254	82	4.9	159	75	203,330	<b>15.4</b>	16.4	-1.0	<b>-6%</b>	15.73	14.95	17.79
2010	1,681	0.164	92	4.9	147	86	210,441	<b>14.9</b>	18.2	-3.3	<b>-18%</b>	15.78	15.02	18.27
2009	1,354	0.100	124	4.9	136	96	195,003	<b>13.0</b>	14.4	-1.4	<b>-10%</b>	13.96	13.85	17.38
2008	40	0.047	32	5.0	126	107	199,917	<b>12.8</b>	11.5	1.4	<b>12%</b>	13.78	13.09	16.32
<b>FNMA 20yr 5</b>	2,177	0.047	548	5.5	99	135	166,775	<b>14.0</b>	15.6	-1.6	<b>-10%</b>	14.67	14.60	16.18
2011	138	0.286	21	5.4	158	75	191,153	<b>17.9</b>	16.2	1.6	<b>10%</b>	17.16	16.58	18.86
2010	222	0.171	39	5.4	146	87	180,840	<b>13.2</b>	23.1	-9.9	<b>-43%</b>	16.12	16.49	19.51
2009	224	0.129	51	5.4	138	95	182,443	<b>12.3</b>	12.5	-0.2	<b>-2%</b>	15.78	15.72	18.38
2008	187	0.034	53	5.6	123	111	172,536	<b>10.4</b>	22.4	-12.0	<b>-54%</b>	16.12	16.33	18.75
<b>FNMA 20yr 5.5</b>	1,492	0.033	641	6.0	85	149	149,994	<b>12.5</b>	13.8	-1.4	<b>-10%</b>	14.15	14.17	14.68
2008	155	0.042	48	6.0	123	110	160,604	<b>9.7</b>	10.9	-1.2	<b>-11%</b>	12.71	14.44	15.12
2007	172	0.036	59	6.1	112	121	168,867	<b>12.8</b>	15.5	-2.7	<b>-17%</b>	16.81	17.20	17.69

\*n.m. - Not Meaningful

Source: Bloomberg

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# FNMA Prepayment Speeds

## July 2017

### FNMA Jumbos

	Indicative Data							Prepayment Speeds						
	Cur Bal (MM)	Factor	# of Pools	WAC	WAM	WALA	WAOLS	Jul	Jun	Chg	% Chg	3mo	6mo	12mo
<b>15yr Jumbo 2</b>	102	0.659	17	2.6	134	42	540,748	<b>5.9</b>	9.4	-3.5	<b>-38%</b>	7.30	9.10	10.34
2013	77	0.617	9	2.6	126	50	542,007	<b>7.3</b>	5.2	2.2	<b>42%</b>	6.93	10.36	11.12
<b>15yr Jumbo 2.5</b>	2,015	0.644	107	2.9	144	32	538,130	<b>6.9</b>	7.4	-0.5	<b>-7%</b>	7.44	6.24	10.30
2017	28	0.985	5	3.0	175	4	530,588	<b>0.4</b>	1.0	-0.7	<b>*n.m.</b>	1.03	-	-
2016	761	0.919	14	2.9	169	10	525,049	<b>5.3</b>	6.8	-1.5	<b>-22%</b>	5.46	4.23	5.33
2015	317	0.668	21	3.0	150	26	543,525	<b>3.4</b>	11.1	-7.7	<b>-70%</b>	7.64	7.00	13.68
2014	48	0.556	10	3.1	140	34	537,511	<b>0.7</b>	12.6	-11.9	<b>*n.m.</b>	4.98	5.71	16.43
2013	510	0.553	34	2.9	123	52	545,180	<b>11.7</b>	6.4	5.3	<b>83%</b>	9.88	7.44	10.56
2012	351	0.446	22	3.0	117	57	552,016	<b>7.6</b>	6.7	0.9	<b>14%</b>	8.58	8.32	11.22
<b>15yr Jumbo 3</b>	462	0.257	97	3.5	121	54	555,200	<b>9.6</b>	9.0	0.6	<b>6%</b>	10.33	9.54	15.51
2017	56	0.975	6	3.5	176	3	547,981	<b>12.3</b>	0.4	11.9	<b>*n.m.</b>	4.51	2.13	-
2014	30	0.469	13	3.5	140	37	542,134	<b>16.8</b>	0.9	15.9	<b>*n.m.</b>	12.36	11.30	20.11
2012	111	0.237	27	3.5	110	63	546,658	<b>13.0</b>	6.6	6.4	<b>98%</b>	14.15	10.61	16.85
2011	219	0.197	24	3.4	105	69	568,788	<b>7.9</b>	10.6	-2.7	<b>-26%</b>	9.43	9.67	13.61
<b>15yr Jumbo 3.5</b>	192	0.109	88	3.9	101	72	581,470	<b>16.8</b>	13.7	3.1	<b>22%</b>	15.06	15.73	18.03
2011	131	0.112	54	3.9	101	72	580,214	<b>12.4</b>	14.2	-1.8	<b>-12%</b>	12.66	13.34	17.21
2010	46	0.085	20	3.9	92	80	592,179	<b>22.7</b>	15.6	7.1	<b>45%</b>	21.58	17.55	17.57
<b>30yr Jumbo 2.5</b>	365	0.802	26	3.4	315	33	539,832	<b>5.5</b>	5.1	0.4	<b>8%</b>	5.29	3.88	5.32
2016	187	0.959	19	3.3	333	12	532,180	<b>3.3</b>	3.9	-0.6	<b>*n.m.</b>	3.59	2.96	2.39
2012	169	0.681	4	3.5	296	56	548,148	<b>4.5</b>	6.8	-2.3	<b>-34%</b>	6.17	4.41	7.61
<b>30yr Jumbo 3</b>	31,196	0.754	396	3.7	323	31	564,869	<b>7.1</b>	8.1	-1.0	<b>-12%</b>	7.13	5.97	9.87
2017	184	0.997	11	3.8	353	3	537,256	<b>0.8</b>	-0.2	1.0	<b>*n.m.</b>	0.26	0.21	-
2016	14,214	0.939	96	3.7	345	12	562,652	<b>5.2</b>	5.9	-0.7	<b>-13%</b>	5.07	4.25	5.25
2015	3,028	0.746	73	3.8	328	26	558,166	<b>10.3</b>	8.9	1.3	<b>15%</b>	8.55	6.83	13.44
2014	569	0.696	15	3.8	318	33	553,378	<b>3.6</b>	10.3	-6.7	<b>-65%</b>	6.45	6.01	13.67
2013	6,564	0.644	89	3.7	301	52	573,871	<b>8.1</b>	10.9	-2.8	<b>-26%</b>	9.22	7.93	12.02
2012	6,634	0.605	110	3.7	295	57	565,497	<b>9.4</b>	9.7	-0.3	<b>-3%</b>	8.86	7.26	12.35
<b>30yr Jumbo 3.5</b>	20,554	0.528	496	4.1	326	30	568,987	<b>12.3</b>	11.6	0.7	<b>6%</b>	11.66	10.06	19.71
2017	3,941	0.987	32	4.2	356	3	567,334	<b>4.7</b>	5.4	-0.7	<b>-13%</b>	4.31	2.59	-
2016	5,032	0.876	54	4.2	347	11	590,614	<b>15.7</b>	13.1	2.6	<b>20%</b>	13.50	10.62	13.74
2015	3,176	0.605	79	4.2	333	24	567,886	<b>15.4</b>	12.3	3.1	<b>25%</b>	14.20	11.52	24.08
2014	1,365	0.409	40	4.2	320	34	549,775	<b>14.4</b>	16.5	-2.1	<b>-13%</b>	14.42	12.00	25.33
2013	1,520	0.455	62	4.1	305	49	571,792	<b>14.2</b>	10.9	3.3	<b>31%</b>	11.90	10.89	19.28
2012	4,966	0.343	166	4.0	291	61	553,632	<b>11.2</b>	11.4	-0.2	<b>-1%</b>	10.86	9.88	18.80
2011	487	0.197	47	4.1	282	69	564,164	<b>15.2</b>	18.4	-3.2	<b>-17%</b>	17.68	13.39	24.12
2010	65	0.203	15	4.2	268	81	596,721	<b>0.7</b>	0.7	0.1	<b>*n.m.</b>	5.63	6.84	19.79
<b>30yr Jumbo 4</b>	8,252	0.186	626	4.6	308	46	583,544	<b>17.3</b>	17.0	0.3	<b>2%</b>	16.38	15.69	25.79
2017	2,001	0.964	15	4.6	355	4	601,494	<b>14.6</b>	12.5	2.0	<b>16%</b>	11.34	8.22	-
2016	626	0.722	27	4.7	346	13	595,407	<b>36.7</b>	23.7	13.0	<b>55%</b>	30.54	25.71	29.08
2015	235	0.511	30	4.7	334	23	569,315	<b>23.6</b>	17.3	6.3	<b>36%</b>	17.55	20.16	31.70
2014	562	0.265	35	4.6	319	37	545,030	<b>15.1</b>	25.2	-10.0	<b>-40%</b>	20.77	19.75	31.15
2013	730	0.213	45	4.6	309	45	544,515	<b>15.0</b>	18.5	-3.5	<b>-19%</b>	13.64	15.67	27.26
2012	381	0.193	54	4.5	286	64	545,343	<b>14.5</b>	18.1	-3.7	<b>-20%</b>	15.18	14.89	24.04
2011	1,888	0.120	231	4.5	281	71	590,806	<b>13.6</b>	14.6	-1.0	<b>-7%</b>	15.24	14.30	24.92
2010	1,794	0.104	164	4.5	270	81	590,367	<b>17.2</b>	17.3	-0.1	<b>0%</b>	16.31	15.27	24.07
2009	36	0.084	22	4.7	254	95	549,834	<b>29.2</b>	32.5	-3.3	<b>-10%</b>	23.33	15.10	25.44
<b>30yr Jumbo 4.5</b>	2,065	0.059	489	4.9	274	77	587,424	<b>22.8</b>	25.7	-2.8	<b>-11%</b>	23.72	21.07	26.80
2017	132	0.948	8	5.1	354	4	624,510	<b>36.6</b>	13.5	23.1	<b>171%</b>	18.13	9.55	-
2013	26	0.151	13	5.2	309	46	543,514	<b>0.1</b>	35.8	-35.7	<b>*n.m.</b>	13.83	17.97	38.30
2011	542	0.072	155	4.9	278	74	598,730	<b>18.9</b>	33.3	-14.4	<b>-43%</b>	25.86	22.24	28.17
2010	883	0.053	186	4.9	267	84	585,888	<b>25.3</b>	22.5	2.8	<b>12%</b>	22.69	19.72	26.03
2009	406	0.041	77	4.9	255	95	573,591	<b>17.4</b>	25.2	-7.8	<b>-31%</b>	23.95	23.41	26.59
<b>30yr Jumbo 5</b>	624	0.032	249	5.4	253	99	565,735	<b>26.9</b>	25.6	1.3	<b>5%</b>	23.95	23.36	27.22
2011	59	0.079	43	5.3	276	76	603,214	<b>35.4</b>	20.5	14.9	<b>73%</b>	33.44	26.49	28.87
2010	204	0.042	93	5.3	266	86	576,540	<b>21.7</b>	34.5	-12.8	<b>-37%</b>	25.73	22.36	26.44
2009	260	0.030	65	5.4	258	94	567,751	<b>25.6</b>	18.3	7.3	<b>40%</b>	19.39	21.68	27.42

\*n.m. - Not Meaningful

Source: Bloomberg

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FNMA Prepayment Speeds  
 July 2017  
 FNMA 105-125 LTV

	Indicative Data							Prepayment Speeds						
	Cur Bal (MM)	Factor	# of Pools	WAC	WAM	WALA	WAOLS	Jul	Jun	Chg	% Chg	3mo	6mo	12mo
<b>30yr 105-125 LTV 3</b>	3,653	0.682	511	3.7	271	51	234,745	<b>10.8</b>	11.9	-1.1	<b>-9%</b>	11.18	9.91	9.83
2016	188	0.950	52	3.9	311	12	223,210	<b>7.2</b>	4.8	2.4	<b>*n.m.</b>	5.29	5.23	2.97
2015	61	0.891	36	3.9	250	25	216,112	<b>0.2</b>	5.1	-4.9	<b>*n.m.</b>	3.71	2.27	2.82
2013	2,121	0.691	220	3.7	275	52	234,100	<b>11.2</b>	11.2	0.0	<b>0%</b>	11.19	9.99	9.66
2012	1,273	0.635	195	3.7	259	57	238,455	<b>11.3</b>	14.3	-3.0	<b>-21%</b>	12.36	10.76	11.11
<b>30yr 105-125 LTV 3.5</b>	16,212	0.639	1104	4.1	287	53	243,218	<b>13.2</b>	13.6	-0.4	<b>-3%</b>	13.29	11.36	12.32
2017	32	0.992	13	4.1	321	5	235,766	<b>0.2</b>	0.2	0.0	<b>*n.m.</b>	0.19	0.19	-
2016	376	0.953	44	4.2	335	13	228,091	<b>3.1</b>	5.2	-2.1	<b>-41%</b>	4.36	3.84	2.83
2015	489	0.884	112	4.2	304	25	222,675	<b>4.3</b>	7.2	-2.9	<b>-40%</b>	6.27	5.59	5.40
2014	205	0.809	84	4.3	258	35	219,361	<b>5.1</b>	11.9	-6.8	<b>-57%</b>	9.96	7.09	7.28
2013	5,939	0.679	329	4.1	293	51	239,626	<b>12.7</b>	12.7	0.0	<b>0%</b>	12.32	11.00	11.32
2012	9,128	0.595	497	4.1	282	59	247,881	<b>14.7</b>	14.8	-0.1	<b>-1%</b>	14.70	12.31	13.69
2011	38	0.546	16	4.1	255	68	236,072	<b>6.1</b>	27.6	-21.5	<b>-78%</b>	12.52	8.53	13.06
<b>30yr 105-125 LTV 4</b>	10,938	0.594	910	4.6	291	53	233,777	<b>14.3</b>	15.7	-1.3	<b>-8%</b>	14.84	13.11	14.15
2017	175	0.992	17	4.6	344	4	225,875	<b>0.1</b>	1.8	-1.7	<b>*n.m.</b>	0.70	0.88	-
2016	231	0.943	22	4.6	337	14	213,260	<b>2.6</b>	7.5	-4.9	<b>-65%</b>	5.12	5.30	3.75
2015	654	0.871	61	4.6	325	25	214,866	<b>10.4</b>	9.2	1.1	<b>12%</b>	9.82	8.88	7.15
2014	1,062	0.780	148	4.7	298	37	217,990	<b>12.0</b>	13.1	-1.1	<b>-9%</b>	11.85	10.22	9.49
2013	2,499	0.687	195	4.6	297	48	226,651	<b>12.8</b>	14.7	-1.9	<b>-13%</b>	13.27	11.83	11.79
2012	5,652	0.527	341	4.5	283	62	241,105	<b>16.8</b>	17.3	-0.6	<b>-3%</b>	17.17	15.00	16.53
2011	525	0.450	88	4.6	265	69	249,840	<b>14.9</b>	19.7	-4.8	<b>-24%</b>	16.73	14.85	18.46
2010	141	0.396	35	4.5	260	80	256,055	<b>9.0</b>	22.7	-13.7	<b>-60%</b>	13.58	13.92	20.64
<b>30yr 105-125 LTV 4.5</b>	4,357	0.494	478	5.0	288	58	236,241	<b>18.9</b>	18.6	0.3	<b>2%</b>	18.50	16.57	17.56
2017	22	0.994	5	5.1	347	4	206,953	<b>0.1</b>	0.3	-0.2	<b>*n.m.</b>	0.18	0.21	-
2015	42	0.854	8	4.9	325	27	193,658	<b>0.4</b>	18.3	-17.9	<b>*n.m.</b>	10.09	6.92	5.65
2014	903	0.746	53	5.1	312	38	214,869	<b>16.3</b>	15.6	0.7	<b>5%</b>	15.71	12.68	11.25
2013	1,037	0.668	74	5.1	303	45	222,267	<b>16.7</b>	13.9	2.8	<b>21%</b>	16.17	15.08	14.30
2012	447	0.472	63	4.9	282	64	234,095	<b>21.3</b>	20.1	1.2	<b>6%</b>	19.93	17.52	18.63
2011	1,417	0.396	159	5.0	271	72	253,999	<b>19.6</b>	19.9	-0.3	<b>-2%</b>	19.39	17.94	21.13
2010	465	0.338	95	5.0	263	82	261,024	<b>26.1</b>	29.3	-3.2	<b>-11%</b>	25.13	22.47	23.41
<b>30yr 105-125 LTV 5</b>	1,402	0.324	269	5.4	272	76	255,622	<b>24.0</b>	25.0	-0.9	<b>-4%</b>	24.14	22.97	23.92
2014	34	0.762	5	5.5	310	40	174,822	<b>37.2</b>	15.1	22.1	<b>146%</b>	22.54	14.53	11.25
2013	61	0.665	11	5.6	306	45	206,664	<b>8.1</b>	19.7	-11.6	<b>-59%</b>	9.74	15.46	13.12
2011	802	0.355	119	5.4	273	74	260,517	<b>25.0</b>	24.8	0.2	<b>1%</b>	24.83	22.84	23.79
2010	423	0.262	106	5.5	264	85	259,292	<b>25.0</b>	28.2	-3.2	<b>-11%</b>	25.80	25.13	25.92
2009	75	0.240	24	5.5	259	92	262,624	<b>14.8</b>	9.4	5.4	<b>57%</b>	17.52	20.40	26.64
<b>30yr 105-125 LTV 5.5</b>	100	0.257	58	5.9	265	85	253,732	<b>26.1</b>	37.2	-11.1	<b>-30%</b>	33.57	29.30	28.53
2010	68	0.246	34	5.9	262	87	254,104	<b>26.5</b>	37.5	-11.0	<b>-29%</b>	33.26	29.56	29.96

\*n.m. - Not Meaningful

Source: Bloomberg

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# FNMA Prepayment Speeds

## July 2017

### FNMA 125+ LTV

	Indicative Data							Prepayment Speeds						
	Cur Bal (MM)	Factor	# of Pools	WAC	WAM	WALA	WAOLS	Jul	Jun	Chg	% Chg	3mo	6mo	12mo
<b>30yr 125+ LTV 3</b>	3,053	0.721	392	3.8	281	53	233,706	<b>9.5</b>	10.8	-1.3	<b>-12%</b>	9.88	8.31	8.12
2013	1,744	0.736	199	3.8	283	52	230,621	<b>9.3</b>	9.2	0.0	<b>0%</b>	9.11	7.18	7.29
2012	1,233	0.691	161	3.7	276	56	239,508	<b>10.3</b>	13.4	-3.1	<b>-23%</b>	11.39	10.23	9.63
<b>30yr 125+ LTV 3.5</b>	16,933	0.685	819	4.1	288	55	237,811	<b>12.0</b>	12.7	-0.7	<b>-5%</b>	11.97	10.40	10.46
2017	15	0.992	5	4.1	334	5	208,726	<b>0.4</b>	0.3	0.1	<b>*n.m.</b>	0.30	0.27	-
2016	157	0.967	31	4.2	338	13	209,532	<b>5.8</b>	1.6	4.2	<b>*n.m.</b>	3.83	2.42	1.57
2015	224	0.902	66	4.2	305	24	205,724	<b>4.4</b>	5.8	-1.4	<b>-24%</b>	4.95	4.74	4.14
2014	67	0.829	37	4.4	264	35	195,296	<b>9.6</b>	0.3	9.3	<b>*n.m.</b>	4.09	5.31	5.42
2013	6,264	0.726	284	4.1	294	51	231,947	<b>10.9</b>	11.3	-0.5	<b>-4%</b>	10.56	9.35	9.13
2012	10,207	0.655	396	4.1	284	58	242,868	<b>13.0</b>	13.9	-0.9	<b>-6%</b>	13.14	11.31	11.52
<b>30yr 125+ LTV 4</b>	9,665	0.658	583	4.6	292	54	230,216	<b>13.4</b>	12.4	1.0	<b>8%</b>	13.00	11.76	12.08
2017	54	0.994	8	4.7	346	4	195,311	<b>1.2</b>	0.1	1.1	<b>*n.m.</b>	0.52	0.43	-
2016	105	0.949	14	4.6	339	14	196,010	<b>9.0</b>	3.3	5.8	<b>*n.m.</b>	5.85	4.03	3.31
2015	316	0.896	46	4.6	325	25	192,317	<b>7.2</b>	6.7	0.4	<b>6%</b>	6.40	6.00	5.08
2014	535	0.816	101	4.7	299	37	200,611	<b>9.8</b>	6.4	3.5	<b>54%</b>	8.59	8.08	7.18
2013	2,261	0.732	172	4.6	298	49	222,400	<b>11.0</b>	11.9	-0.9	<b>-8%</b>	11.25	10.22	9.26
2012	6,394	0.613	242	4.5	286	60	238,184	<b>15.0</b>	13.6	1.4	<b>10%</b>	14.46	13.02	13.87
<b>30yr 125+ LTV 4.5</b>	2,354	0.700	207	5.1	301	48	215,389	<b>12.2</b>	11.9	0.3	<b>3%</b>	12.01	10.80	10.69
2014	632	0.797	61	5.1	311	39	203,858	<b>10.6</b>	8.5	2.1	<b>25%</b>	10.03	9.10	8.40
2013	1,065	0.744	87	5.1	302	46	211,157	<b>12.5</b>	11.5	1.0	<b>8%</b>	11.44	10.15	9.23
2012	616	0.564	48	5.0	287	62	236,842	<b>14.1</b>	16.2	-2.1	<b>-13%</b>	15.43	13.84	15.46
<b>30yr 125+ LTV 5</b>	120	0.726	23	5.5	309	42	189,459	<b>7.5</b>	17.9	-10.5	<b>-58%</b>	13.67	11.23	10.56
2014	58	0.741	10	5.4	313	39	185,255	<b>12.2</b>	22.5	-10.3	<b>-46%</b>	14.37	12.41	11.53
2013	62	0.721	12	5.6	305	45	192,604	<b>2.9</b>	13.5	-10.6	<b>-79%</b>	13.10	10.19	9.71

\*n.m. - Not Meaningful

Source: Bloomberg

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FNMA Prepayment Speeds  
 July 2017  
 FNMA Relocation

	Indicative Data							Prepayment Speeds						
	Cur Bal (MM)	Factor	# of Pools	WAC	WAM	WALA	WAOLS	Jul	Jun	Chg	% Chg	3mo	6mo	12mo
15yr RELO 2	51	0.677	18	2.6	143	28	298,708	21.4	18.3	3.1	17%	16.87	14.03	13.38
2015	22	0.675	7	2.6	139	25	291,732	29.3	25.9	3.4	13%	22.21	17.04	15.82
15yr RELO 2.5	257	0.515	69	3.0	134	41	272,449	15.3	14.5	0.8	6%	15.10	13.11	13.99
2015	47	0.825	7	2.9	152	23	280,269	5.4	5.5	0.0	0%	6.48	8.08	6.88
2014	113	0.544	40	3.0	139	37	266,959	23.7	20.1	3.6	18%	21.83	18.08	18.05
2012	36	0.384	9	2.8	112	62	277,198	5.9	2.8	3.1	*n.m.	6.33	5.19	10.07
2011	32	0.337	2	2.9	105	68	264,699	15.2	18.9	-3.7	-20%	14.89	13.83	13.78
30yr RELO 2.5	315	0.651	39	3.1	312	40	324,105	11.7	13.4	-1.7	-12%	12.68	9.37	11.36
2013	161	0.587	25	3.1	299	51	322,734	13.2	18.7	-5.5	-29%	17.02	11.79	12.87
30yr RELO 3	3,447	0.741	204	3.7	328	27	327,443	15.1	16.4	-1.3	-8%	14.90	12.23	12.59
2017	440	0.988	24	3.9	355	3	336,048	5.4	4.2	1.2	*n.m.	3.70	2.42	-
2016	692	0.940	22	3.6	346	11	329,548	6.9	6.9	0.0	0%	7.86	6.31	4.54
2015	1,189	0.797	47	3.7	330	25	325,735	21.3	20.2	1.1	5%	18.79	14.56	12.87
2014	406	0.671	44	3.9	318	35	323,626	18.2	21.5	-3.3	-15%	18.79	15.03	17.26
2013	373	0.550	34	3.5	302	50	323,449	17.8	19.8	-2.0	-10%	17.83	15.21	16.21
2012	305	0.487	26	3.5	289	61	326,073	11.7	21.8	-10.0	-46%	15.76	13.89	15.23
2011	42	0.590	7	3.8	274	68	333,373	27.2	6.1	21.0	343%	12.45	14.04	14.38
30yr RELO 3.5	1,737	0.500	162	4.1	310	43	313,105	16.5	22.4	-5.9	-26%	19.07	16.52	21.12
2017	238	0.989	12	4.1	355	3	330,093	5.6	1.5	4.1	*n.m.	2.58	-	-
2014	779	0.561	63	4.2	317	37	304,366	18.2	27.6	-9.4	-34%	22.25	19.02	22.77
2013	241	0.482	26	4.1	307	46	303,903	19.5	22.4	-2.9	-13%	18.48	15.65	22.68
2012	137	0.404	15	3.9	284	65	316,726	16.7	16.3	0.4	2%	18.95	13.69	18.70
2011	172	0.350	28	4.0	277	70	323,201	19.2	25.7	-6.5	-25%	21.37	19.15	19.79
2010	152	0.308	15	3.9	266	80	330,251	13.1	18.1	-5.0	-28%	16.99	14.67	18.73
30yr RELO 4	564	0.210	134	4.5	281	68	301,923	20.8	27.2	-6.4	-24%	22.83	20.72	25.67
2014	139	0.384	38	4.6	314	40	278,495	29.8	37.9	-8.1	-21%	31.45	27.47	29.40
2011	214	0.195	50	4.4	273	74	306,923	17.8	24.3	-6.5	-27%	18.70	18.35	25.01
2010	171	0.159	25	4.5	263	84	319,235	19.9	21.2	-1.3	-6%	21.86	19.30	24.66
30yr RELO 4.5	116	0.061	151	4.9	236	110	256,425	24.5	22.6	1.8	8%	23.79	23.10	25.82
2011	48	0.150	20	4.8	272	76	281,445	28.4	35.7	-7.3	-20%	25.50	23.44	24.39

\*n.m. - Not Meaningful

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