

GNMA Prepayment Speeds

December 2019

GNMA 15yr

	Indicative Data						Prepayment Speeds						Buyout Prepayment Component				
	Cur Bal (MM)	Factor	# of Pools	WAC	WAM	WALA	Dec	Nov	Chg	% Chg	3mo	6mo	12mo	1mo	3mo	6mo	12mo
GNMA 15yr 2	30	0.340	23	2.5	91	89	↓4.7	15.9	-11.2	-71%	9.20	9.17	9.08	0.00	0.00	0.00	0.00
GNMA 15yr 2.5	950	0.278	312	3.0	90	90	↓11.6	13.4	-1.8	-13%	13.29	12.97	11.90	0.42	0.85	0.64	0.62
2013	321	0.316	105	3.0	94	86	↓11.2	12.8	-1.6	-12%	12.84	13.29	12.32	1.10	1.19	0.89	0.76
2012	602	0.257	177	3.0	86	94	↓12.0	14.0	-2.0	-14%	13.79	13.13	11.93	0.08	0.70	0.53	0.56
GNMA 15yr 3	1,573	0.209	673	3.5	84	96	↓13.2	14.4	-1.2	-8%	13.88	13.74	12.70	0.62	0.51	0.52	0.56
2014	52	0.334	35	3.5	107	73	↓9.3	23.7	-14.5	-61%	18.50	16.28	14.85	0.00	0.37	0.49	0.89
2013	176	0.295	97	3.5	96	84	↑16.0	11.6	4.4	38%	12.17	11.17	12.21	0.21	0.45	0.42	0.73
2012	942	0.215	318	3.5	83	97	↓13.2	14.0	-0.8	-5%	13.80	13.54	12.33	0.82	0.57	0.58	0.58
2011	355	0.173	176	3.5	77	103	↓11.9	15.6	-3.7	-24%	14.32	15.12	13.67	0.48	0.45	0.51	0.37
2010	42	0.131	40	3.5	67	113	↑18.1	13.4	4.6	35%	14.52	15.10	13.20	0.00	0.00	0.00	0.34
GNMA 15yr 3.5	838	0.132	617	4.0	73	107	↓14.2	14.9	-0.7	-5%	13.72	13.85	13.06	0.87	0.58	0.65	0.60
2013	59	0.317	43	4.0	98	82	↑9.7	8.5	1.1	13%	7.47	8.51	9.53	0.00	0.00	0.00	0.22
2012	49	0.249	57	4.0	84	96	↑8.9	4.9	4.0	*n.m.	7.71	10.06	9.83	0.00	0.00	0.83	0.76
2011	409	0.131	292	4.0	73	107	↑15.4	14.5	0.9	7%	14.68	14.74	13.38	1.33	0.82	0.70	0.56
2010	302	0.110	195	4.0	66	114	↓14.6	18.3	-3.7	-20%	14.73	14.36	13.74	0.61	0.51	0.66	0.68
GNMA 15yr 4	1,220	0.086	1021	4.5	61	119	↓13.1	13.7	-0.5	-4%	13.28	13.23	12.78	0.38	0.54	0.52	0.67
2011	246	0.111	229	4.5	71	109	↓12.4	13.8	-1.4	-10%	13.80	13.66	13.04	0.40	0.52	0.69	0.72
2010	537	0.095	362	4.5	61	119	↑13.8	13.2	0.6	5%	13.00	12.79	12.24	0.35	0.59	0.50	0.64
2009	410	0.068	373	4.5	52	128	↓13.1	14.4	-1.3	-9%	13.73	13.94	13.55	0.41	0.51	0.45	0.68
GNMA 15yr 4.5	295	0.064	718	5.0	54	126	↓12.4	13.0	-0.5	-4%	13.11	13.30	12.72	1.49	0.79	1.19	1.13
2010	92	0.095	146	5.0	60	120	↓10.2	14.8	-4.7	-32%	13.84	13.53	12.67	2.08	1.26	1.47	1.68
2009	182	0.063	349	5.0	52	128	↑12.7	12.1	0.6	5%	12.75	12.96	12.29	1.37	0.57	1.07	0.92
GNMA 15yr 5	85	0.032	726	5.5	45	135	↓12.6	14.3	-1.7	-12%	12.58	14.63	14.28	0.30	0.48	1.39	1.40
2009	36	0.065	161	5.5	51	129	↓9.4	10.8	-1.4	-13%	8.48	11.27	10.74	0.71	0.43	1.93	1.69

*n.m. - Not Meaningful

Source: Bloomberg

INTENDED FOR INSTITUTIONAL INVESTORS ONLY. The information included herein has been obtained from sources deemed reliable, but it is not in any way guaranteed, and it, together with any opinions expressed, is subject to change at any time. Any and all details offered in this publication are preliminary and are therefore subject to change at any time. This has been prepared for general information purposes only and does not consider the specific investment objectives, financial situation and particular needs of any individual or institution. This information is, by its very nature, incomplete and specifically lacks information critical to making final investment decisions. Investors should seek financial advice as to the appropriateness of investing in any securities or investment strategies mentioned or recommended. The accuracy of the financial projections is dependent on the occurrence of future events which cannot be assured; therefore, the actual results achieved during the projection period may vary from the projections. Interest rate swaps and derivatives are offered and sold via Vining Sparks Interest Rate Products, LLC (VSIRP). VSIRP is an independent operating entity and is not a subsidiary of Vining Sparks IBG, LP. VSIRP is not a broker/dealer registered with the SEC. The firm may have positions, long or short, in any or all securities mentioned. Vining Sparks is a member FINRA/SIPC.

GNMA Prepayment Speeds

December 2019

GNMA2 15yr

	Indicative Data						Prepayment Speeds						Buyout Prepayment Component				
	Cur Bal (MM)	Factor	# of Pools	WAC	WAM	WALA	Dec	Nov	Chg	% Chg	3mo	6mo	12mo	1mo	3mo	6mo	12mo
GNMA 2 15yr 2	509	0.427	65	2.5	113	67	↓11.1	11.5	-0.4	-3%	11.11	12.06	10.61	0.00	0.06	0.07	0.13
2017	44	0.735	13	2.5	147	33	↓17.6	23.4	-5.8	-25%	18.11	13.56	10.62	0.00	0.00	0.00	0.00
2016	137	0.631	10	2.5	137	43	↑14.9	10.2	4.7	47%	11.94	14.71	11.52	0.00	0.21	0.25	0.26
2015	45	0.547	14	2.5	120	60	↓5.8	6.0	-0.2	-3%	6.16	8.72	8.14	0.00	0.00	0.00	0.00
2013	175	0.347	13	2.5	95	85	↑10.7	10.5	0.2	2%	10.92	11.19	10.36	0.00	0.00	0.00	0.09
2012	100	0.314	10	2.5	89	91	↓6.4	12.3	-5.9	-48%	9.47	10.58	10.92	0.01	0.00	0.00	0.13
GNMA 2 15yr 2.5	8,954	0.439	116	2.9	122	58	↓13.4	13.9	-0.5	-3%	13.55	13.70	12.12	0.20	0.31	0.28	0.27
2019	159	0.980	11	3.0	176	4	↓1.9	6.8	-5.0	-73%	3.92	5.34	-	0.00	0.00	0.00	-
2018	76	0.812	9	3.0	154	26	↑8.0	7.2	0.9	12%	9.84	8.26	7.30	0.00	0.00	0.40	0.46
2017	1,382	0.693	19	2.9	146	34	↑15.2	14.0	1.2	8%	14.79	13.93	11.53	0.07	0.08	0.23	0.18
2016	3,284	0.571	12	2.9	135	45	↑15.4	14.0	1.3	9%	14.22	14.44	12.71	0.14	0.22	0.22	0.23
2015	1,236	0.440	17	2.9	121	59	↓11.6	14.8	-3.2	-22%	13.58	14.29	12.86	0.13	0.34	0.33	0.33
2014	229	0.364	15	3.0	111	69	↓11.5	14.2	-2.7	-19%	12.95	13.38	12.47	0.00	0.27	0.13	0.11
2013	1,423	0.316	14	2.9	94	86	↓11.5	13.8	-2.3	-17%	12.27	12.23	11.43	0.42	0.53	0.36	0.41
2012	1,138	0.264	11	2.9	87	93	↓12.1	13.6	-1.5	-11%	12.94	13.40	11.62	0.41	0.59	0.40	0.32
2011	27	0.209	6	3.1	78	102	↑21.5	8.3	13.3	161%	11.35	10.77	12.02	0.00	0.00	0.00	0.15
GNMA 2 15yr 3	12,162	0.372	201	3.4	125	55	↓15.6	17.5	-1.9	-11%	16.19	15.92	14.20	0.46	0.49	0.48	0.45
2019	1,002	0.977	13	3.5	175	5	↓2.9	4.5	-1.6	*n.m.	3.51	3.23	-	0.14	0.05	0.17	-
2018	604	0.775	13	3.5	157	23	↑18.7	18.9	-0.2	-1%	17.78	16.37	12.91	0.51	0.55	0.42	0.30
2017	2,429	0.650	14	3.4	147	33	↓19.8	21.1	-1.3	-6%	20.23	18.65	15.60	0.61	0.55	0.50	0.44
2016	1,898	0.502	15	3.4	134	46	↓19.0	19.6	-0.6	-3%	18.21	17.08	15.02	0.65	0.67	0.61	0.56
2015	2,007	0.381	22	3.4	122	58	↓16.8	17.9	-1.0	-6%	16.86	16.83	15.25	0.38	0.50	0.48	0.48
2014	1,233	0.295	30	3.4	111	69	↓14.7	18.3	-3.6	-20%	16.01	15.98	14.41	0.11	0.42	0.51	0.59
2013	1,108	0.270	14	3.4	96	84	↑12.7	12.2	0.5	4%	12.73	13.33	12.58	0.76	0.49	0.60	0.55
2012	1,587	0.198	61	3.3	84	96	↓12.8	16.3	-3.5	-22%	14.34	14.64	13.28	0.22	0.36	0.32	0.27
2011	286	0.166	12	3.4	77	103	↓10.0	18.8	-8.8	-47%	14.22	14.50	12.94	0.98	0.49	0.47	0.28
GNMA 2 15yr 3.5	7,955	0.419	219	3.9	143	37	↓22.6	24.1	-1.5	-6%	22.57	19.62	15.41	0.73	0.77	0.71	0.53
2019	1,326	0.945	13	4.0	172	8	↑11.5	8.4	3.1	38%	8.60	6.82	-	0.27	0.25	0.12	-
2018	2,871	0.754	20	4.0	160	20	↑31.7	34.5	-2.8	-8%	31.30	25.82	17.74	0.39	0.42	0.43	0.27
2017	1,478	0.611	12	3.9	148	32	↓24.8	26.1	-1.4	-5%	26.25	23.04	18.35	1.49	1.44	1.08	0.73
2016	237	0.480	12	3.9	135	45	↓13.8	18.0	-4.2	-23%	17.16	16.49	13.92	1.18	1.74	1.67	1.22
2015	346	0.369	18	3.9	124	56	↓15.4	18.9	-3.4	-18%	15.82	15.70	14.20	0.87	1.04	1.18	1.20
2014	593	0.256	27	3.8	109	71	↑15.4	15.3	0.2	1%	14.87	14.40	14.18	1.44	1.48	1.39	1.08
2013	363	0.229	27	3.9	100	80	↑16.3	16.2	0.1	1%	15.57	14.19	13.32	0.54	1.17	1.17	0.87
2012	128	0.158	55	3.9	84	96	↓11.5	12.5	-1.0	-8%	11.42	13.07	12.89	0.71	0.39	0.38	0.21
2011	424	0.119	18	3.9	76	104	↓13.7	14.0	-0.3	-2%	12.85	13.11	13.12	0.47	0.35	0.58	0.48
2010	186	0.115	12	3.9	67	113	↓12.2	16.6	-4.4	-27%	14.57	14.86	13.71	0.88	0.54	0.46	0.29
GNMA 2 15yr 4	1,901	0.239	164	4.5	137	43	↓26.6	29.7	-3.1	-10%	27.01	21.73	15.64	0.72	0.74	0.67	0.57
2019	479	0.921	12	4.5	171	9	↑19.7	19.7	0.0	0%	16.35	10.53	-	0.54	0.52	0.70	-
2017	19	0.610	12	4.3	146	34	↑31.7	20.3	11.4	56%	24.51	24.01	18.13	0.00	1.93	1.24	2.03
2014	34	0.282	24	4.4	109	71	↓7.3	12.2	-4.9	-40%	11.44	12.59	11.79	3.13	2.56	1.83	1.45
2013	52	0.231	19	4.4	100	80	↑17.0	15.2	1.8	12%	16.35	13.60	12.99	2.07	0.92	0.83	0.63
2011	290	0.090	19	4.3	72	108	↓13.5	16.1	-2.6	-16%	14.02	14.25	13.77	0.30	0.67	0.60	0.65
2010	127	0.082	19	4.3	63	117	↓12.2	18.2	-5.9	-33%	17.26	15.45	14.10	0.00	1.13	1.08	0.70
2009	76	0.067	13	4.4	52	128	↑21.0	12.6	8.4	67%	16.36	15.89	15.75	1.42	0.75	0.74	0.49
GNMA 2 15yr 4.5	167	0.080	113	4.9	71	109	↓15.5	24.2	-8.7	-36%	19.31	17.75	15.89	0.68	0.83	1.56	1.30
2011	21	0.087	18	4.8	73	107	↓12.3	12.7	-0.4	-3%	14.56	14.86	13.94	0.00	1.31	3.52	2.29
2010	45	0.081	16	4.8	60	120	↓16.0	16.4	-0.4	-2%	14.12	15.00	14.94	0.00	0.74	0.53	0.77
2009	75	0.065	20	4.9	53	127	↓11.9	12.2	-0.2	-2%	14.36	14.45	13.98	1.53	0.92	1.13	1.00

*n.m. - Not Meaningful

Source: Bloomberg

INTENDED FOR INSTITUTIONAL INVESTORS ONLY. The information included herein has been obtained from sources deemed reliable, but it is not in any way guaranteed, and it, together with any opinions expressed, is subject to change at any time. Any and all details offered in this publication are preliminary and are therefore subject to change at any time. This has been prepared for general information purposes only and does not consider the specific investment objectives, financial situation and particular needs of any individual or institution. This information is, by its very nature, incomplete and specifically lacks information critical to making final investment decisions. Investors should seek financial advice as to the appropriateness of investing in any securities or investment strategies mentioned or recommended. The accuracy of the financial projections is dependent on the occurrence of future events which cannot be assured; therefore, the actual results achieved during the projection period may vary from the projections. Interest rate swaps and derivatives are offered and sold via Vining Sparks Interest Rate Products, LLC (VSIRP). VSIRP is an independent operating entity and is not a subsidiary of Vining Sparks IBG, LP. VSIRP is not a broker/dealer registered with the SEC. The firm may have positions, long or short, in any or all securities mentioned. Vining Sparks is a member FINRA/SIPC.

GNMA Prepayment Speeds

December 2019

GNMA 30yr

	Indicative Data						Prepayment Speeds						Buyout Prepayment Component				
	Cur Bal (MM)	Factor	# of Pools	WAC	WAM	WALA	Dec	Nov	Chg	% Chg	3mo	6mo	12mo	1mo	3mo	6mo	12mo
GNMA 30yr 2	57	0.582	50	2.5	288	72	↓6.1	15.0	-8.9	-59%	9.00	10.64	10.02	2.34	2.35	1.50	1.74
2013	39	0.519	31	2.5	276	84	↓8.7	18.4	-9.7	-53%	11.10	12.72	11.42	3.38	3.39	2.17	1.74
GNMA 30yr 2.5	1,896	0.503	710	3.0	277	83	↓8.3	11.0	-2.7	-25%	10.76	11.12	9.92	0.76	1.19	0.95	0.89
2016	202	0.839	85	3.0	313	47	↓6.2	8.0	-1.9	-23%	6.59	5.66	5.48	0.00	1.36	1.18	1.19
2015	33	0.687	35	3.0	302	58	↓8.2	11.3	-3.1	-27%	9.29	9.98	10.42	3.73	1.26	0.85	1.21
2013	731	0.490	262	3.0	271	89	↓8.9	12.0	-3.1	-26%	11.83	12.13	10.80	0.85	0.82	0.71	0.68
2012	829	0.452	200	3.0	267	93	↓9.0	11.5	-2.5	-22%	11.31	11.85	10.33	0.70	1.37	0.96	0.92
GNMA 30yr 3	20,104	0.402	4886	3.5	276	84	↓11.8	14.5	-2.7	-19%	13.35	13.54	11.94	1.35	1.36	1.30	1.39
2019	727	0.995	71	3.5	356	4	↑1.9	1.1	0.7	*n.m.	1.08	0.70	-	0.00	0.00	0.00	-
2016	594	0.807	209	3.5	315	45	↓7.6	9.0	-1.4	-15%	8.45	8.38	6.72	2.17	2.11	1.95	1.95
2015	1,475	0.548	398	3.5	298	62	↓14.4	15.8	-1.4	-9%	15.36	14.88	12.97	1.26	1.02	1.03	1.26
2014	332	0.528	183	3.5	291	69	↓6.9	18.7	-11.8	-63%	14.01	14.00	11.54	0.00	1.21	1.23	1.31
2013	8,939	0.379	1920	3.5	272	88	↓12.7	15.7	-3.0	-19%	14.13	14.26	12.49	1.65	1.59	1.45	1.48
2012	7,736	0.365	1811	3.5	265	95	↓11.8	14.1	-2.3	-16%	13.21	13.42	11.90	1.09	1.17	1.18	1.29
2011	78	0.428	162	3.5	257	103	↑13.9	11.3	2.6	23%	10.84	9.42	8.24	1.83	0.61	1.00	1.42
GNMA 30yr 3.5	20,044	0.315	7056	4.0	275	85	↓13.3	15.5	-2.2	-14%	14.45	14.44	12.41	1.88	1.81	1.86	1.70
2019	1,042	0.994	121	4.0	356	4	↑1.2	0.6	0.6	*n.m.	1.28	0.87	-	0.00	0.00	0.00	-
2018	307	0.834	97	4.0	336	24	↓13.1	19.1	-6.0	-31%	17.27	17.63	12.81	1.23	1.24	0.80	0.57
2017	1,142	0.822	304	4.0	331	29	↓16.6	17.1	-0.6	-3%	15.73	14.74	10.98	3.33	3.34	3.27	2.32
2016	663	0.713	206	4.0	316	44	↓16.5	20.0	-3.6	-18%	18.23	17.13	13.41	2.95	2.86	2.90	2.51
2015	1,268	0.463	535	4.0	300	60	↓16.7	18.3	-1.6	-9%	17.32	17.51	14.40	2.97	2.83	2.78	2.34
2014	1,012	0.403	406	4.0	291	69	↑17.2	15.3	2.0	13%	16.11	15.60	13.05	2.69	2.53	2.57	2.35
2013	2,921	0.359	1252	4.0	269	91	↓12.1	14.8	-2.6	-18%	14.03	13.97	12.39	2.28	2.07	2.15	2.00
2012	7,088	0.269	2459	4.0	259	101	↓13.2	14.9	-1.7	-12%	14.18	14.19	12.40	1.68	1.63	1.63	1.57
2011	3,456	0.230	1168	4.0	254	106	↓14.3	17.4	-3.1	-18%	15.11	14.69	12.67	1.09	1.10	1.22	1.25
2010	1,113	0.226	459	4.0	241	119	↓11.2	16.8	-5.6	-33%	14.28	13.92	12.04	2.07	1.47	1.52	1.20
GNMA 30yr 4	23,504	0.220	8674	4.5	263	97	↓15.5	17.0	-1.5	-9%	16.14	15.66	13.45	1.98	1.92	1.92	1.87
2019	938	0.985	122	4.5	353	7	↑3.5	3.2	0.4	*n.m.	2.82	1.74	-	0.17	0.06	0.03	-
2018	425	0.881	139	4.5	339	21	↓16.3	16.0	0.3	2%	15.93	13.23	9.42	4.46	3.42	1.80	0.94
2017	778	0.794	169	4.5	330	30	↓20.8	21.3	-0.6	-3%	20.08	18.38	12.93	4.26	4.14	4.70	3.14
2016	985	0.567	268	4.5	317	43	↑19.7	19.4	0.3	2%	19.85	18.75	16.16	3.17	3.31	3.31	3.16
2015	2,045	0.348	1049	4.5	301	59	↓20.0	21.0	-1.0	-5%	20.82	20.98	18.47	3.28	3.78	3.74	3.52
2014	1,291	0.369	619	4.5	284	76	↓15.3	19.1	-3.7	-20%	15.79	15.98	13.78	4.26	3.39	3.23	3.13
2013	730	0.352	483	4.5	273	87	↓11.6	15.4	-3.9	-25%	13.76	13.89	12.04	1.27	1.86	2.47	2.33
2012	583	0.275	684	4.5	258	102	↓11.5	12.5	-1.0	-8%	12.36	13.11	11.71	2.31	2.38	2.46	2.34
2011	4,985	0.183	2363	4.5	250	110	↓14.6	16.7	-2.2	-13%	16.02	15.43	13.24	1.57	1.62	1.55	1.66
2010	8,316	0.184	1924	4.5	241	119	↓16.2	17.4	-1.2	-7%	16.54	15.81	13.42	1.52	1.30	1.31	1.34
2009	2,399	0.145	745	4.5	224	136	↓13.7	15.3	-1.6	-10%	14.49	14.05	11.94	1.18	1.19	1.15	1.20
GNMA 30yr 4.5	25,115	0.112	10361	5.0	240	120	↓17.0	18.3	-1.4	-8%	17.50	17.02	14.34	1.85	1.91	1.95	1.90
2019	229	0.951	66	5.0	351	9	↑15.6	16.7	-1.2	-7%	11.81	9.95	-	1.45	0.97	0.96	-
2018	348	0.856	100	5.0	343	17	↓22.0	31.9	-9.9	-31%	29.57	21.38	12.61	3.87	2.97	2.48	1.77
2017	1,091	0.573	409	5.0	329	31	↑31.3	29.7	1.6	6%	30.41	29.95	23.30	3.96	5.50	6.07	5.28
2016	370	0.500	276	5.0	316	44	↓19.7	20.1	-0.4	-2%	19.74	19.48	16.73	4.86	3.57	4.24	3.97
2015	383	0.373	326	5.0	304	56	↓17.0	20.1	-3.0	-15%	17.68	17.41	16.23	2.46	2.79	2.85	3.22
2014	37	0.369	47	5.0	279	81	↓0.5	10.8	-10.3	*n.m.	4.02	8.17	8.96	0.00	0.00	0.77	3.27
2013	107	0.376	116	5.0	266	94	↓11.5	11.6	-0.1	-1%	13.77	11.23	10.48	2.67	4.27	3.55	2.73
2011	2,276	0.155	1742	5.0	248	112	↓12.9	16.5	-3.6	-22%	14.77	15.19	13.20	2.19	2.17	2.26	2.02
2010	7,048	0.129	2622	5.0	237	123	↓16.8	17.9	-1.1	-6%	17.37	16.94	14.26	1.83	1.68	1.66	1.73
2009	12,613	0.090	3247	5.0	226	134	↓16.5	17.7	-1.2	-7%	16.75	16.28	13.91	1.49	1.58	1.59	1.59
GNMA 30yr 5	15,695	0.079	11996	5.5	223	137	↓14.1	15.7	-1.6	-10%	14.78	14.61	13.17	2.28	2.40	2.36	2.26
2019	309	0.984	44	5.5	350	10	↑3.7	3.6	0.1	*n.m.	3.04	1.73	-	3.47	1.77	0.89	-
2018	364	0.855	63	5.5	344	16	↑21.9	19.7	2.2	11%	19.35	15.28	10.97	6.70	6.73	5.18	3.22
2017	315	0.489	208	5.5	331	29	↓27.9	31.5	-3.6	-12%	27.78	26.44	25.97	6.29	6.49	8.21	7.10
2015	42	0.441	32	5.5	302	58	↓0.2	13.3	-13.1	*n.m.	5.91	11.92	11.67	3.48	1.86	5.08	4.96
2011	179	0.174	326	5.5	248	112	↓10.2	11.2	-1.0	-9%	9.27	10.64	10.93	3.84	2.61	2.87	3.00
2010	2,131	0.149	1548	5.5	236	124	↑15.2	14.8	0.4	3%	15.03	14.84	13.08	2.73	2.77	2.58	2.38
2009	8,420	0.088	3666	5.5	226	134	↓14.3	16.4	-2.1	-13%	15.48	15.32	13.64	2.21	2.28	2.26	2.25
GNMA 30yr 5.5	6,961	0.036	13453	6.0	184	176	↓11.3	13.4	-2.1	-16%	12.50	12.83	11.95	2.14	2.15	2.07	2.09
2010	50	0.108	183	6.0	237	123	↓10.7	15.1	-4.3	-29%	13.95	11.69	11.31	1.48	1.94	2.46	2.74
2009	763	0.091	1353	6.0	225	135	↓12.6	13.6	-0.9	-7%	13.44	13.68	12.69	3.29	2.78	2.90	2.68
GNMA 30yr 6	4,925	0.027	15099	6.5	178	182	↓12.1	12.6	-0.5	-4%	12.31	12.27	11.67	2.22	2.37	2.38	2.46
2009	121	0.086	495	6.5	224	136	↓10.6	14.6	-4.0	-28%	11.94	12.42	12.09	3.09	3.17	3.32	3.03

*n.m. - Not Meaningful

Source: Bloomberg

INTENDED FOR INSTITUTIONAL INVESTORS ONLY. The information included herein has been obtained from sources deemed reliable, but it is not in any way guaranteed, and it, together with any opinions expressed, is subject to change at any time. Any and all details offered in this publication are preliminary and are therefore subject to change at any time. This has been prepared for general information purposes only and does not consider the specific investment objectives, financial situation and particular needs of any individual or institution. This information is, by its very nature, incomplete and specifically lacks information critical to making final investment decisions. Investors should seek financial advice as to the appropriateness of investing in any securities or investment strategies mentioned or recommended. The accuracy of the financial projections is dependent on the occurrence of future events which cannot be assured; therefore, the actual results achieved during the projection period may vary from the projections. Interest rate swaps and derivatives are offered and sold via Vining Sparks Interest Rate Products, LLC (VSIRP). VSIRP is an independent operating entity and is not a subsidiary of Vining Sparks IBG, LP. VSIRP is not a broker/dealer registered with the SEC. The firm may have positions, long or short, in any or all securities mentioned. Vining Sparks is a member FINRA/SIPC.

GNMA Prepayment Speeds

December 2019

GNMA2 30yr

	Indicative Data						Prepayment Speeds							Buyout Prepayment Component			
	Cur Bal (MM)	Factor	# of Pools	WAC	WAM	WALA	Dec	Nov	Chg	% Chg	3mo	6mo	12mo	1mo	3mo	6mo	12mo
GNMA 2 30yr 2	80	0.737	118	2.5	308	52	↑5.7	4.1	1.6	*n.m.	5.09	7.32	5.76	0.00	1.19	0.60	0.53
2016	50	0.840	60	2.6	317	43	↑8.8	0.1	8.7	*n.m.	3.99	6.42	4.97	0.00	1.89	0.95	0.48
GNMA 2 30yr 2.5	24,144	0.773	495	3.0	331	29	↓6.5	10.6	-4.2	-39%	9.59	11.58	10.24	0.00	0.00	0.00	-
2019	11,889	0.996	49	3.1	356	4	↓1.0	1.0	0.0	*n.m.	0.77	0.48	-	0.63	1.04	0.89	0.81
2018	142	0.959	18	3.1	340	20	↓7.3	6.7	0.6	9%	5.56	7.48	5.87	1.56	1.16	0.85	0.96
2017	329	0.832	93	3.0	326	34	↓9.7	12.1	-2.4	-20%	10.47	9.12	7.78	1.56	1.16	0.85	0.96
2016	8,895	0.713	157	3.0	316	44	↓11.8	15.7	-3.9	-25%	13.75	14.06	11.43	1.56	1.16	0.85	0.96
2015	464	0.610	87	2.9	300	60	↓14.5	15.7	-1.1	-7%	15.21	13.64	11.90	0.89	1.63	1.74	3.13
2014	36	0.510	7	3.0	290	70	↓5.0	12.3	-7.3	-59%	9.62	11.54	11.24	0.70	1.30	0.96	1.18
2013	1,626	0.452	55	3.0	271	89	↓10.0	12.9	-2.9	-22%	12.15	12.64	11.21	1.25	1.49	0.94	1.07
2012	763	0.418	27	3.0	266	94	↓10.5	16.5	-6.0	-36%	13.39	12.92	11.03	1.15	1.27	1.34	1.28
GNMA 2 30yr 3	431,798	0.604	2977	3.4	315	45	↓12.6	15.0	-2.4	-16%	14.31	15.05	12.99	0.17	0.16	0.13	-
2019	99,861	0.993	554	3.5	354	6	↔1.3	1.3	0.0	*n.m.	1.21	1.15	-	1.72	1.77	1.76	1.58
2018	6,405	0.922	84	3.5	338	22	↑10.7	10.5	0.1	1%	10.09	8.59	7.51	1.47	1.54	1.59	1.40
2017	38,939	0.776	263	3.5	328	32	↓17.5	19.4	-1.8	-9%	18.21	16.67	13.10	1.72	1.77	1.76	1.58
2016	157,938	0.646	1112	3.4	315	45	↓16.7	18.8	-2.1	-11%	17.86	17.61	14.53	1.47	1.54	1.59	1.40
2015	42,260	0.497	297	3.5	301	59	↓16.9	19.5	-2.6	-13%	18.40	18.12	15.04	1.09	1.22	1.17	1.17
2014	6,345	0.419	94	3.5	292	68	↓17.7	17.8	-0.1	-1%	17.63	17.39	14.71	1.51	1.33	1.39	1.40
2013	40,756	0.393	277	3.3	272	88	↓12.9	14.7	-1.8	-12%	13.86	14.19	12.34	1.16	1.18	1.18	1.25
2012	39,244	0.361	280	3.4	266	94	↓12.5	14.3	-1.9	-13%	13.52	13.83	11.92	0.90	0.98	0.94	0.99
2011	49	0.334	9	3.6	253	107	↓7.9	16.4	-8.5	-52%	10.46	11.92	9.47	0.00	0.00	0.00	0.00
GNMA 2 30yr 3.5	622,377	0.527	13629	3.9	316	44	↓19.5	21.2	-1.7	-8%	20.00	18.88	15.09	2.37	2.34	2.37	2.02
2019	114,792	0.983	2979	4.0	353	7	↑5.6	3.2	2.4	*n.m.	3.64	2.69	-	2.67	2.54	2.49	1.83
2018	38,090	0.766	407	4.0	337	23	↑38.2	37.3	0.9	2%	35.36	29.47	19.86	3.88	3.78	3.77	3.19
2017	156,346	0.730	2649	3.9	328	32	↓25.3	28.0	-2.6	-9%	26.20	23.03	16.66	0.66	0.55	0.36	-
2016	94,308	0.577	3331	3.9	315	45	↓20.4	23.3	-2.8	-12%	21.60	20.75	16.80	2.67	2.54	2.49	1.83
2015	94,893	0.429	1861	3.9	303	57	↓20.2	22.1	-1.8	-8%	20.91	20.29	16.73	3.88	3.78	3.77	3.19
2014	35,098	0.319	637	3.9	290	70	↓19.4	20.3	-0.9	-4%	19.36	18.92	15.80	2.45	2.50	2.47	2.10
2013	31,654	0.328	608	3.8	273	87	↓14.8	16.1	-1.3	-8%	15.39	15.52	13.33	1.83	1.87	1.82	1.68
2012	47,478	0.282	896	3.8	261	99	↓13.5	15.3	-1.8	-11%	14.44	14.65	12.63	2.00	1.93	1.87	1.67
2011	9,085	0.244	154	3.9	254	106	↓13.5	15.0	-1.5	-10%	14.44	14.59	12.56	1.25	1.33	1.31	1.24
2010	607	0.225	77	4.0	241	119	↑18.8	14.4	4.5	31%	16.92	15.88	12.89	1.08	0.95	0.87	0.84
GNMA 2 30yr 4	360,603	0.469	19996	4.4	322	38	↓29.6	31.0	-1.4	-5%	29.39	26.49	19.63	0.33	1.29	1.28	1.30
2019	81,066	0.945	4378	4.5	351	9	↑27.2	13.7	13.5	99%	15.94	9.59	-	5.54	5.27	5.24	4.16
2018	91,900	0.693	2229	4.5	341	19	↑43.4	51.1	-7.6	-15%	47.34	42.12	28.54	4.50	4.66	4.98	4.54
2017	68,759	0.657	5457	4.4	328	32	↓29.3	31.9	-2.6	-8%	29.94	27.65	20.66	3.28	3.02	2.98	2.66
2016	18,315	0.514	2766	4.4	316	44	↓23.3	24.9	-1.6	-6%	23.63	22.81	18.68	1.55	1.12	0.77	-
2015	26,754	0.376	2374	4.4	303	57	↓20.2	22.2	-1.9	-9%	21.06	20.69	17.60	5.54	5.27	5.24	4.16
2014	30,059	0.261	1292	4.3	287	73	↓17.5	19.7	-2.2	-11%	18.24	17.96	15.62	4.50	4.66	4.98	4.54
2013	14,759	0.223	316	4.4	278	82	↓17.5	19.8	-2.3	-12%	18.56	18.34	15.78	4.00	3.92	4.00	3.86
2012	6,836	0.220	441	4.3	259	101	↓14.0	17.0	-3.0	-18%	15.17	15.14	13.31	3.37	3.33	3.31	3.20
2011	12,223	0.174	431	4.3	251	109	↓14.8	17.4	-2.5	-15%	16.00	15.86	13.58	2.47	2.26	2.23	2.14
2010	9,418	0.181	260	4.4	241	119	↓15.0	17.9	-2.9	-16%	16.39	15.78	13.32	2.64	2.46	2.30	2.27
2009	455	0.152	20	4.4	224	136	↓13.1	14.1	-1.0	-7%	15.23	14.34	12.50	1.73	1.71	1.56	1.50
GNMA 2 30yr 4.5	167,420	0.368	15990	4.9	319	41	↓35.8	39.1	-3.3	-8%	37.18	32.93	23.91	1.42	1.30	1.30	1.20
2019	30,397	0.945	4118	5.0	350	10	↑23.0	14.5	8.5	58%	15.50	9.88	-	1.73	1.71	1.56	1.50
2018	76,751	0.674	5915	5.0	343	17	↑49.2	54.5	-5.4	-10%	51.77	45.26	31.13	1.42	1.30	1.30	1.20
2017	13,543	0.603	2430	4.9	329	31	↓32.7	36.1	-3.4	-9%	33.90	32.18	27.14	0.50	0.61	0.60	0.76
2016	3,372	0.452	491	4.9	317	43	↓26.2	29.3	-3.1	-11%	27.76	27.10	22.59	4.26	3.88	3.43	2.69
2015	1,183	0.465	857	4.8	299	61	↑19.1	17.1	2.0	12%	17.87	17.98	14.94	5.13	4.00	2.42	-
2014	5,669	0.264	579	4.8	285	75	↓17.3	19.7	-2.4	-12%	18.25	18.17	16.20	6.49	6.46	6.20	4.91
2013	6,610	0.223	168	4.8	276	84	↓17.7	17.9	-0.2	-1%	18.00	17.65	15.56	5.62	6.55	6.84	6.24
2012	349	0.218	43	4.9	265	95	↓19.7	20.1	-0.4	-2%	19.21	19.82	17.07	4.31	5.10	4.85	4.46
2011	10,956	0.141	524	4.8	247	113	↓15.2	17.8	-2.6	-15%	16.38	16.18	14.09	4.49	4.39	4.56	4.42
2010	10,685	0.141	438	4.9	238	122	↓16.1	17.8	-1.8	-10%	16.90	16.23	14.08	3.47	3.68	3.55	3.44
2009	7,647	0.113	148	4.9	227	133	↓15.5	18.4	-2.9	-16%	16.95	16.49	14.03	5.91	6.01	5.15	4.77
GNMA 2 30yr 5	62,897	0.234	8567	5.4	306	54	↓33.8	36.6	-2.8	-8%	35.02	31.42	23.73	1.82	1.89	1.86	1.84
2019	6,150	0.948	2333	5.5	352	8	↑19.0	16.3	2.7	17%	14.66	8.85	-	7.00	7.62	7.60	6.07
2018	33,143	0.704	4494	5.5	344	16	↑44.7	48.2	-3.5	-7%	46.42	41.01	29.09	9.97	9.42	8.48	6.92
2017	2,078	0.586	227	5.4	330	30	↑35.1	34.9	0.2	1%	35.04	37.41	37.35	1.57	1.60	1.53	1.55
2016	781	0.526	7	5.4	318	42	↓33.6	38.0	-4.3	-11%	35.32	34.07	31.94	1.50	1.50	1.43	1.34
2015	446	0.491	11	5.4	305	55	↓29.6	32.3	-2.7	-8%	29.94	29.61	26.38	4.25	3.90	3.48	2.79
2014	237	0.417	27	5.3	291	69	↓23.0	28.0	-5.0	-18%	25.59	27.89	24.06	2.07	1.53	1.00	-
2013	97	0.381	32	5.3	283	77	↓17.5	23.3	-5.9	-25%	26.75	25.24	23.56	7.00	7.62	7.60	6.07
2012	263	0.222	5	5.4	260	100	↓17.6	18.6	-1.0	-6%	18.47	19.95	18.38	9.97	9.42	8.48	6.92
2011	1,684	0.168	195	5.3	2												

GNMA Prepayment Speeds

December 2019

GNMA2 JUMBO 15yr/30yr

	Indicative Data						Prepayment Speeds						Buyout Prepayment Component				
	Cur Bal (MM)	Factor	# of Pools	WAC	WAM	WALA	Dec	Nov	Chg	% Chg	3mo	6mo	12mo	1mo	3mo	6mo	12mo
GNMA 2 Jumbo 2.5	1,069	0.813	110	3.0	318	42	↑5.6	5.0	0.6	*n.m.	5.52	9.63	7.74	0.00	0.00	0.00	0.00
2019	752	0.994	9	3.0	356	4	↓1.8	2.8	-1.0	*n.m.	1.63	-	-	0.00	0.00	-	-
2017	28	0.811	20	3.0	235	125	↓1.1	1.2	-0.1	*n.m.	1.18	9.08	6.27	0.00	0.00	0.00	0.00
2016	161	0.668	23	2.9	245	115	↓12.2	12.7	-0.4	-3%	12.28	13.14	10.23	0.00	0.00	0.00	0.00
2015	23	0.429	14	2.9	139	221	↑21.8	6.4	15.4	239%	10.31	5.67	3.38	0.00	0.00	0.00	0.00
2013	37	0.453	22	3.0	213	147	↑25.7	0.7	25.0	*n.m.	9.87	13.58	7.44	0.00	0.00	0.00	0.00
2012	66	0.468	17	3.0	230	130	↑7.7	1.2	6.6	*n.m.	6.07	10.75	8.79	0.00	0.00	0.00	0.00
GNMA 2 Jumbo 3	23,466	0.605	177	3.4	320	40	↓18.3	20.1	-1.9	-9%	19.06	18.28	14.37	0.59	0.64	0.66	0.61
2019	5,343	0.992	17	3.5	355	5	↑1.7	0.8	0.9	*n.m.	1.21	1.00	-	0.23	0.08	0.04	-
2018	301	0.812	18	3.5	334	26	↓27.8	28.7	-1.0	-3%	30.62	23.52	13.58	2.08	0.70	0.35	0.46
2017	2,313	0.745	23	3.5	328	32	↑30.5	26.6	4.0	15%	28.06	22.71	16.22	0.00	0.69	0.86	0.74
2016	10,977	0.611	21	3.4	316	44	↓22.5	25.5	-3.0	-12%	23.13	21.42	16.33	0.81	0.68	0.70	0.63
2015	2,268	0.428	23	3.4	300	60	↓18.1	22.3	-4.3	-19%	20.66	19.50	15.45	0.42	1.13	0.87	0.67
2014	279	0.368	15	3.4	291	69	↑22.9	13.8	9.2	67%	17.95	15.60	11.93	0.00	0.69	0.60	0.44
2013	1,012	0.350	25	3.3	270	90	↑17.5	15.7	1.8	11%	14.64	14.16	11.83	1.56	0.52	0.58	0.68
2012	964	0.326	23	3.4	256	104	↑15.8	11.9	3.9	33%	12.13	11.80	9.60	0.00	0.33	0.25	0.32
GNMA 2 Jumbo 3.5	21,908	0.426	172	3.9	322	38	↓31.8	36.4	-4.5	-12%	34.31	30.19	21.84	1.42	1.41	1.39	1.18
2019	3,841	0.972	15	4.0	354	6	↑14.3	5.2	9.1	174%	7.34	4.47	-	0.00	0.28	0.19	-
2018	1,961	0.631	23	4.0	337	23	↑49.1	62.0	-12.9	-21%	57.04	50.36	33.62	0.58	0.92	0.87	0.86
2017	6,913	0.621	22	3.9	329	31	↓40.3	45.4	-5.1	-11%	42.79	36.36	25.23	1.84	1.43	1.47	1.12
2016	3,080	0.456	16	3.9	317	43	↓30.4	34.7	-4.4	-13%	33.96	30.06	22.58	2.59	2.87	2.69	2.02
2015	3,379	0.283	19	3.9	304	56	↓28.8	35.4	-6.6	-19%	31.16	27.94	21.75	2.09	1.75	1.64	1.46
2014	884	0.181	19	3.8	291	69	↑28.4	26.0	2.4	9%	26.73	22.85	17.20	0.50	0.91	0.73	0.71
2013	492	0.202	19	3.8	273	87	↓17.3	20.5	-3.2	-16%	17.55	16.59	13.89	1.90	0.92	0.84	1.00
2012	1,220	0.191	18	3.8	261	99	↑16.8	15.2	1.7	11%	16.50	15.69	12.34	0.00	0.90	0.65	0.63
2011	129	0.174	15	3.9	247	113	↑7.8	4.5	3.3	*n.m.	7.99	7.81	7.51	0.00	0.00	0.00	0.28
GNMA 2 Jumbo 4	7,085	0.295	140	4.4	330	30	↓51.4	58.5	-7.2	-12%	55.24	52.90	39.18	2.46	2.00	1.98	1.76
2019	1,571	0.872	12	4.5	353	7	↑52.4	40.1	12.4	31%	38.31	23.29	-	0.55	0.30	0.42	-
2018	2,522	0.449	14	4.5	341	19	↑63.7	76.3	-12.6	-17%	72.88	70.76	53.38	2.63	1.91	1.50	1.14
2017	1,582	0.456	12	4.4	330	30	↓44.6	52.4	-7.8	-15%	47.83	45.04	34.21	4.02	3.79	3.78	3.19
2016	285	0.275	11	4.4	317	43	↓34.5	42.4	-8.0	-19%	36.71	35.78	26.80	7.87	3.22	3.96	4.74
2015	365	0.161	12	4.4	305	55	↑33.9	22.4	11.5	51%	28.81	30.92	24.31	1.24	2.53	3.01	2.83
2014	204	0.073	13	4.3	290	70	↓21.8	36.5	-14.7	-40%	26.39	23.93	18.42	0.00	0.00	2.04	1.84
2013	65	0.058	8	4.3	283	77	↓15.7	46.5	-30.8	-66%	33.83	26.28	20.84	7.10	4.57	2.31	2.18
2012	86	0.089	13	4.3	260	100	↑18.1	6.0	12.1	201%	12.00	14.56	12.91	0.00	4.27	3.11	2.00
2011	142	0.067	20	4.3	252	108	↓22.0	26.6	-4.6	-17%	22.18	19.88	16.78	0.00	0.00	1.12	1.16
2010	250	0.093	16	4.4	242	118	↑16.1	15.2	0.9	6%	14.20	16.26	12.80	0.00	0.00	0.55	0.67
GNMA 2 Jumbo 4.5	1,585	0.203	112	5.0	330	30	↓59.2	71.1	-11.9	-17%	67.19	63.40	47.54	5.06	2.92	2.63	1.91
2019	359	0.860	9	5.0	352	8	↑47.0	40.2	6.9	17%	40.22	25.91	-	3.63	1.22	0.61	-
2018	870	0.415	11	5.0	345	15	↓70.4	83.5	-13.1	-16%	79.51	75.38	57.66	4.44	2.80	2.42	1.50
2017	79	0.330	10	4.9	330	30	↓48.5	58.1	-9.5	-16%	52.10	52.57	43.55	6.61	6.67	8.40	7.33
2016	20	0.294	7	4.8	318	42	↓22.8	46.6	-23.8	-51%	37.59	32.24	28.86	47.49	19.32	10.18	7.23
2014	30	0.054	15	4.8	289	71	↓14.5	29.5	-15.0	-51%	23.61	25.62	17.80	17.81	6.33	6.01	4.03
2011	53	0.041	16	4.8	246	114	↑9.8	1.1	8.7	*n.m.	6.55	16.62	14.69	0.00	0.00	0.24	1.84
2010	127	0.059	16	4.9	242	118	↓13.2	25.0	-11.8	-47%	19.52	18.36	15.01	3.80	4.01	3.17	2.48
GNMA 2 Jumbo 5	274	0.097	69	5.5	318	42	↓58.4	62.2	-3.9	-6%	59.42	52.47	39.24	10.66	6.48	3.86	3.02
2010	31	0.036	10	5.4	239	121	↓15.9	17.4	-1.5	-9%	26.19	22.21	13.27	17.24	6.11	5.97	3.03
2009	27	0.025	14	5.4	229	131	↓14.6	17.1	-2.5	-15%	32.00	26.27	23.79	0.00	11.71	8.82	6.54

*n.m. - Not Meaningful

Source: Bloomberg

INTENDED FOR INSTITUTIONAL INVESTORS ONLY. The information included herein has been obtained from sources deemed reliable, but it is not in any way guaranteed, and it, together with any opinions expressed, is subject to change at any time. Any and all details offered in this publication are preliminary and are therefore subject to change at any time. This has been prepared for general information purposes only and does not consider the specific investment objectives, financial situation and particular needs of any individual or institution. This information is, by its very nature, incomplete and specifically lacks information critical to making final investment decisions. Investors should seek financial advice as to the appropriateness of investing in any securities or investment strategies mentioned or recommended. The accuracy of the financial projections is dependent on the occurrence of future events which cannot be assured; therefore, the actual results achieved during the projection period may vary from the projections. Interest rate swaps and derivatives are offered and sold via Vining Sparks Interest Rate Products, LLC (VSIRP). VSIRP is an independent operating entity and is not a subsidiary of Vining Sparks IBG, LP. VSIRP is not a broker/dealer registered with the SEC. The firm may have positions, long or short, in any or all securities mentioned. Vining Sparks is a member FINRA/SIPC.