VINING SPARKS

GNMA Prepayment Speeds
October 2021
GNMA2 15yr

	Indicative Data						Prepayment Speeds							Buyout Prepayment Component				Delinquencies		
	Cur Bal (MM)	*Factor*	*# of Pools*	*WAC*	*WAM*	*WALA*	Oct	Sep	Chg	% Chg	3mo	6mo	12mo	1mo	3mo	6mo	12mo	30D	60D	90D
GNMA 2 15yr 2	4,555	0.787	100	2.4	164	11	**12.1**	10.8	1.3	**12%**	11.04	9.93	9.91	0.02	0.06	0.14	0.95	0.21	0.08	0.21
2021	3,362	0.958	18	2.4	172	5	**6.9**	5.9	1.0	**17%**	6.06	5.03	-	0.00	0.06	0.07	-	0.22	0.05	0.06
2020	907	0.834	16	2.4	161	11	**26.4**	21.4	5.0	**23%**	22.21	17.62	11.83	0.00	0.00	0.11	0.08	0.22	0.17	0.45
2017	26	0.449	12	2.5	122	51	**18.2**	26.6	-8.4	**-32%**	20.24	23.58	22.06	0.00	0.00	1.29	4.85	0.35	0.41	1.37
2016	77	0.354	10	2.5	113	60	**27.4**	25.4	2.0	**8%**	25.82	23.60	23.84	0.00	0.00	0.53	1.92	0.00	0.12	1.52
2015	26	0.316	14	2.5	96	75	**26.1**	26.4	-0.3	**-1%**	20.23	20.85	21.60	0.00	0.00	0.00	0.75	0.00	0.00	0.14
2013	97	0.193	13	2.5	73	101	**14.4**	22.2	-7.8	**-35%**	19.34	19.48	18.37	0.00	0.46	0.51	1.61	0.14	0.10	0.89
2012	54	0.171	10	2.5	67	107	**18.1**	15.1	3.0	**20%**	20.61	20.36	18.83	1.56	0.52	0.26	1.61	0.20	0.00	0.79
GNMA 2 15yr 2.5	7,033	0.296	148	2.9	122	52	**24.2**	25.6	-1.4	**-6%**	25.79	26.30	27.19	0.82	1.17	1.21	1.21	0.47	0.13	1.03
2021	1,156	0.961	9	2.9	171	4	**7.4**	6.4	1.0	**16%**	6.09	4.89	-	0.00	0.00	0.00	-	0.44	0.01	0.02
2020	1,223	0.643	20	2.9	160	14	**36.5**	39.1	-2.6	**-7%**	38.97	36.19	30.71	0.69	0.72	0.71	0.45	0.38	0.20	0.90
2019	168	0.421	15	3.0	152	23	**35.3**	39.3	-4.0	**-10%**	41.38	42.18	46.30	0.50	3.66	2.33	1.75	0.39	0.13	1.49
2018	36	0.399	8	3.0	129	43	**23.9**	16.7	7.2	**43%**	22.62	33.79	36.76	0.00	0.00	1.11	1.63	0.00	0.00	3.07
2017	662	0.331	20	2.9	122	51	**27.4**	31.3	-3.9	**-12%**	30.87	31.66	33.17	1.48	1.88	1.86	1.87	0.58	0.13	1.52
2016	1,674	0.291	12	2.9	112	61	**26.1**	26.0	0.0	**0%**	26.11	26.85	28.48	0.89	1.68	1.74	1.37	0.56	0.20	1.67
2015	633	0.225	17	2.9	97	75	**26.1**	22.8	3.3	**15%**	25.73	25.57	26.81	0.76	0.99	1.17	1.58	0.42	0.09	1.24
2014	117	0.184	16	3.0	88	84	**18.5**	28.2	-9.8	**-35%**	21.70	24.65	26.45	1.27	0.73	0.50	0.93	0.17	0.13	1.75
2013	762	0.169	13	2.9	72	101	**18.1**	20.5	-2.4	**-12%**	20.79	20.38	20.12	1.13	1.23	1.17	1.41	0.64	0.10	0.69
2012	589	0.136	11	2.9	65	109	**20.0**	20.4	-0.5	**-2%**	19.40	20.84	20.66	0.94	0.87	0.97	1.17	0.29	0.13	0.52
2011	14	0.108	6	3.1	56	118	**14.2**	29.2	-15.0	**-51%**	20.35	20.03	20.43	14.60	5.13	2.60	2.62	1.21	0.00	0.00
GNMA 2 15yr 3	6,582	0.193	237	3.4	106	67	**27.1**	28.7	-1.6	**-6%**	28.42	29.36	30.88	1.50	2.18	2.73	2.09	0.77	0.26	1.63
2021	32	0.967	4	3.4	169	5	**4.0**	1.7	2.3	***n.m.**	6.09	5.75	-	0.00	1.76	0.88	-	1.96	0.00	0.00
2020	496	0.530	25	3.4	157	17	**30.3**	39.5	-9.2	**-23%**	37.01	37.47	42.91	1.34	1.65	2.40	1.78	0.49	0.21	1.76
2019	549	0.355	22	3.5	151	24	**37.8**	42.6	-4.8	**-11%**	41.07	44.03	47.74	2.14	3.88	4.63	3.43	0.71	0.41	2.29
2018	237	0.303	13	3.5	132	41	**39.5**	35.2	4.3	**12%**	36.37	39.03	40.11	2.02	3.01	3.59	2.76	0.82	0.24	2.23
2017	1,096	0.293	14	3.5	123	51	**30.9**	31.7	-0.8	**-2%**	31.86	32.99	33.98	1.55	2.87	3.80	2.60	0.73	0.21	1.63
2016	977	0.258	15	3.4	111	63	**24.8**	27.0	-2.2	**-8%**	26.70	27.24	27.47	1.71	2.53	3.07	2.22	0.97	0.32	2.10
2015	1,032	0.196	22	3.4	99	74	**22.5**	25.7	-3.2	**-12%**	24.70	25.57	26.27	0.96	1.60	2.19	1.78	0.90	0.29	1.82
2014	602	0.152	29	3.4	88	85	**25.9**	24.0	1.8	**8%**	23.97	24.14	25.20	2.10	1.82	2.24	1.89	0.90	0.28	1.49
2013	618	0.143	15	3.4	74	99	**23.0**	22.5	0.5	**2%**	22.93	21.94	21.44	1.13	1.92	1.89	1.55	0.62	0.21	1.19
2012	741	0.103	60	3.3	62	111	**21.6**	20.1	1.5	**7%**	20.98	21.08	21.01	1.40	1.09	1.30	1.25	0.64	0.20	0.75
2011	200	0.079	12	3.4	56	118	**22.9**	19.0	3.9	**20%**	21.89	23.33	23.56	0.72	1.10	1.13	1.40	0.55	0.03	0.66
GNMA 2 15yr 3.5	3,517	0.182	243	3.9	117	58	**28.7**	31.4	-2.7	**-9%**	31.29	33.25	34.59	3.47	4.02	4.43	3.42	1.30	0.37	2.37
2021	11	0.982	3	3.9	175	3	**10.2**	2.1	8.1	***n.m.**	4.35	-	-	0.00	0.00	-	-	1.65	0.00	0.00
2020	115	0.561	17	3.9	158	18	**31.0**	40.8	-9.8	**-24%**	37.68	39.32	38.11	9.88	8.29	6.08	4.65	1.04	0.39	1.73
2019	467	0.308	20	4.0	148	27	**37.9**	42.6	-4.7	**-11%**	41.86	44.82	46.83	3.54	5.06	5.65	3.89	1.23	0.43	2.46
2018	1,006	0.264	19	4.0	136	39	**35.4**	37.5	-2.1	**-6%**	37.41	40.35	41.86	4.44	4.72	5.66	4.15	1.03	0.38	2.89
2017	713	0.294	14	3.9	124	51	**24.5**	25.5	-0.9	**-4%**	28.19	29.55	30.77	2.54	4.40	4.34	3.18	1.66	0.40	2.96
2016	126	0.254	12	3.9	112	63	**14.9**	30.2	-15.3	**-51%**	23.07	24.61	25.48	3.20	3.51	4.61	3.77	2.10	0.54	2.99
2015	191	0.204	18	3.9	100	73	**22.1**	21.6	0.5	**2%**	22.05	23.28	22.97	3.44	3.14	2.78	2.81	1.56	0.36	2.01
2014	323	0.139	27	3.9	86	87	**22.0**	22.9	-0.9	**-4%**	21.62	22.23	22.25	2.37	1.95	2.66	2.50	1.45	0.42	1.84
2013	199	0.125	27	3.9	78	96	**19.2**	24.2	-5.0	**-21%**	22.49	21.73	20.75	3.34	3.43	3.46	2.93	1.16	0.13	1.42
2012	67	0.083	55	3.9	63	112	**17.7**	20.9	-3.2	**-16%**	19.74	19.64	20.76	1.18	1.73	2.04	2.17	1.84	0.32	1.23
2011	231	0.059	16	3.9	54	121	**22.9**	21.0	1.9	**9%**	21.65	20.91	20.90	1.73	1.27	1.56	1.93	0.96	0.23	0.78
2010	67	0.053	11	3.9	45	130	**21.8**	22.6	-0.8	**-3%**	22.48	21.87	21.98	0.86	0.45	0.80	1.85	0.54	0.30	0.91
GNMA 2 15yr 4	786	0.098	170	4.5	110	65	**33.2**	32.5	0.6	**2%**	32.92	34.15	34.44	3.48	4.44	5.11	4.63	1.58	0.56	2.11
2019	202	0.354	23	4.5	147	28	**44.4**	35.5	8.9	**25%**	38.93	39.24	40.07	6.47	6.43	7.50	6.36	1.83	1.05	2.38
2018	284	0.265	18	4.5	139	35	**34.7**	37.9	-3.2	**-8%**	38.00	40.97	41.20	3.65	6.13	6.15	5.32	1.57	0.46	3.05
2014	22	0.156	20	4.4	86	88	**24.4**	9.9	14.5	**146%**	18.95	17.74	16.64	0.00	1.75	2.95	3.43	2.83	0.24	1.62
2013	27	0.136	16	4.4	78	96	**17.2**	17.9	-0.7	**-4%**	18.60	18.01	16.98	1.86	0.62	1.51	1.76	1.30	1.10	1.30
2011	142	0.044	17	4.3	51	124	**22.4**	22.6	-0.2	**-1%**	21.64	21.73	21.18	0.43	0.70	1.43	2.09	1.12	0.25	0.77
2010	58	0.038	11	4.3	42	134	**20.2**	25.3	-5.1	**-20%**	20.80	21.54	21.65	0.45	1.20	2.75	3.21	1.13	0.14	0.52
2009	30	0.026	13	4.4	32	145	**30.1**	33.8	-3.7	**-11%**	31.00	27.48	25.15	5.24	2.33	4.30	3.40	1.36	0.11	2.47
GNMA 2 15yr 4.5	73	0.036	94	4.8	50	126	**21.9**	23.8	-2.0	**-8%**	23.23	23.14	22.89	2.85	2.46	2.69	3.65	1.75	0.52	1.70
2011	10	0.042	14	4.8	51	125	**26.6**	19.6	7.1	**36%**	23.39	26.16	22.81	3.11	4.08	2.93	3.11	2.01	0.52	4.82
2010	17	0.039	15	4.8	39	137	**15.0**	26.4	-11.4	**-43%**	20.72	21.70	20.31	2.54	1.13	1.99	3.99	1.79	0.36	0.60
2009	35	0.028	17	4.9	32	144	**22.0**	20.3	1.7	**8%**	20.62	20.75	21.44	3.78	2.85	2.72	3.94	1.72	0.23	0.68

**n.m. - Not Meaningful*

Source: Bloomberg

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VINING SPARKS

GNMA Prepayment Speeds
October 2021
GNMA2 30yr

	Indicative Data						Prepayment Speeds							Buyout Prepayment Component				Delinquencies		
	Cur Bal (MM)	*Factor*	*# of Pools*	*WAC*	*WAM*	*WALA*	Oct	Sep	Chg	% Chg	3mo	6mo	12mo	1mo	3mo	6mo	12mo	30D	60D	90D
GNMA 2 30yr 1.5	5,278	0.965	52	2.0	349	6	6.3	6.5	-0.2	-3%	5.88	4.47	3.97	0.49	0.18	0.18	0.54	0.23	0.09	0.22
2021	4,961	0.967	14	2.0	350	6	5.9	6.5	-0.6	-9%	5.72	4.28	-	0.53	0.18	0.16	-	0.24	0.10	0.16
2020	312	0.944	8	2.0	346	10	11.3	5.8	5.5	95%	8.08	6.77	3.92	0.00	0.00	0.30	0.15	0.18	0.03	0.59
GNMA 2 30yr 2	367,723	0.941	2,408	2.4	347	7	12.8	11.5	1.4	12%	11.08	8.61	5.48	0.36	0.25	0.23	0.15	0.54	0.16	0.52
2021	218,551	0.970	721	2.4	350	5	6.9	6.1	0.8	13%	6.06	4.66	-	0.28	0.17	0.14	-	0.49	0.12	0.23
2020	149,113	0.903	1,579	2.4	343	11	20.8	17.9	2.9	16%	17.30	13.08	7.95	0.47	0.35	0.31	0.19	0.60	0.20	0.89
2016	38	0.661	56	2.6	295	61	21.0	10.9	10.0	92%	15.01	12.42	12.09	0.00	0.00	0.77	0.38	2.54	0.60	8.00
GNMA 2 30yr 2.5	447,605	0.780	16,158	2.9	345	10	26.5	26.6	-0.2	-1%	25.88	24.58	23.95	1.67	1.67	1.64	1.18	1.24	0.40	1.76
2021	197,251	0.973	6,813	2.9	351	4	8.2	6.2	2.1	33%	6.46	4.96	-	0.75	0.55	0.33	-	1.23	0.35	0.32
2020	234,853	0.715	8,806	2.9	342	13	37.9	37.3	0.6	2%	36.11	32.10	26.69	2.08	2.03	1.86	1.18	1.27	0.45	2.55
2019	9,409	0.400	114	3.0	333	23	46.0	45.3	0.7	2%	44.60	43.49	51.60	5.47	6.06	6.56	4.77	0.83	0.35	5.72
2018	64	0.416	20	3.1	312	42	47.6	29.6	18.0	61%	43.65	35.28	38.25	9.17	6.45	5.91	6.94	2.84	0.87	5.77
2017	208	0.532	90	3.0	303	51	24.7	29.5	-4.8	-16%	26.02	25.92	23.54	2.31	1.56	2.20	3.81	1.35	0.42	6.99
2016	3,928	0.326	148	3.0	292	60	32.9	39.1	-6.3	-16%	35.47	34.90	38.51	5.70	4.60	4.17	3.64	1.24	0.47	5.42
2015	402	0.374	84	3.0	279	73	26.5	26.9	-0.4	-2%	25.27	26.89	28.82	1.40	1.82	2.06	2.40	1.47	0.49	5.53
2014	57	0.315	8	2.9	270	82	29.3	23.5	5.8	25%	27.11	27.35	29.80	0.00	0.70	1.14	1.76	2.63	0.00	6.73
2013	723	0.281	48	3.0	247	102	21.4	23.4	-2.0	-8%	22.83	23.29	23.57	2.23	2.06	2.27	2.80	0.83	0.28	1.75
2012	711	0.250	26	3.0	242	106	21.3	25.9	-4.6	-18%	23.97	23.71	25.81	0.72	1.60	2.02	2.63	1.12	0.20	2.05
GNMA 2 30yr 3	368,529	0.361	18,025	3.4	316	38	36.4	36.7	-0.3	-1%	36.73	38.62	41.51	5.75	6.68	6.82	5.40	1.94	0.63	4.46
2021	68,266	0.979	6,467	3.4	352	4	7.2	5.8	1.4	24%	5.86	4.50	-	0.87	0.47	0.28	-	2.01	0.49	0.22
2020	92,180	0.589	8,143	3.5	340	16	42.0	41.6	0.4	1%	41.42	41.91	39.34	6.36	6.99	6.32	4.45	2.46	0.94	4.81
2019	63,833	0.357	1,014	3.5	333	23	51.3	49.2	2.2	4%	49.45	49.43	53.12	9.27	11.63	11.48	8.49	1.63	0.57	6.79
2018	622	0.298	85	3.5	321	35	53.2	45.6	7.5	16%	48.21	45.88	47.70	11.93	9.77	10.15	7.92	2.57	0.91	8.43
2017	16,488	0.290	258	3.5	304	49	41.6	43.0	-1.4	-3%	42.93	43.43	44.92	7.38	7.86	7.87	6.66	1.92	0.65	6.54
2016	63,836	0.261	1,104	3.4	292	61	40.3	40.1	0.1	0%	40.21	40.72	42.40	7.07	7.46	7.49	5.82	2.00	0.61	6.48
2015	17,561	0.206	291	3.5	277	76	35.7	37.1	-1.5	-4%	36.72	38.28	40.66	4.84	4.41	4.71	4.22	1.66	0.52	4.47
2014	2,752	0.181	96	3.5	268	84	34.9	35.7	-0.8	-2%	34.82	35.49	38.18	4.21	3.85	4.02	4.06	1.88	0.51	3.88
2013	21,700	0.209	282	3.3	248	101	27.5	27.9	-0.4	-1%	27.78	28.07	30.00	2.59	2.71	3.00	3.26	1.25	0.34	1.79
2012	21,263	0.196	271	3.4	241	107	27.1	26.3	0.8	3%	26.53	26.97	29.11	2.20	2.62	2.68	2.84	1.12	0.29	1.66
2011	27	0.185	8	3.6	229	119	10.7	45.7	-35.0	-77%	28.96	27.22	25.97	5.01	5.46	5.12	3.00	0.48	0.36	2.42
GNMA 2 30yr 3.5	305,412	0.239	22,432	3.9	297	57	37.7	40.5	-2.7	-7%	39.98	41.30	41.75	9.91	10.91	10.44	8.76	2.81	0.91	5.99
2021	7,944	0.989	2,412	3.9	355	4	3.8	3.0	0.7	*n.m.	2.84	1.93	-	1.34	0.69	0.42	-	1.46	0.33	0.17
2020	25,563	0.734	4,658	3.9	342	16	33.0	33.0	0.1	0%	32.60	33.51	28.68	7.88	9.09	8.05	6.34	3.94	1.46	4.24
2019	54,880	0.339	4,863	4.0	332	25	49.3	51.0	-1.8	-3%	51.00	51.71	51.50	16.85	18.95	17.79	13.79	3.51	1.28	9.52
2018	7,759	0.244	394	4.0	315	40	43.9	47.5	-3.5	-7%	47.28	49.30	48.98	11.95	13.15	12.87	11.64	2.77	0.98	7.26
2017	63,363	0.265	2,613	3.9	305	50	41.7	45.9	-4.2	-9%	44.70	45.86	46.07	11.68	12.00	11.58	9.37	2.71	0.86	7.30
2016	40,983	0.251	3,326	3.9	291	63	37.5	40.1	-2.6	-7%	39.61	40.24	39.78	11.05	11.66	10.89	9.34	3.36	1.05	7.18
2015	41,455	0.187	1,818	3.9	278	74	35.3	37.9	-2.7	-7%	37.56	38.93	39.29	7.42	8.22	7.88	6.89	2.64	0.78	5.28
2014	16,042	0.146	627	3.9	266	85	31.4	34.8	-3.4	-10%	33.79	35.00	36.41	5.08	5.26	4.99	4.95	2.14	0.65	4.07
2013	16,993	0.176	603	3.8	248	99	26.9	27.1	-0.2	-1%	27.78	28.72	29.40	3.33	4.10	4.13	4.49	1.84	0.48	2.23
2012	25,296	0.150	884	3.8	237	111	26.6	28.0	-1.4	-5%	27.61	28.00	29.20	2.64	2.94	2.84	3.38	1.38	0.35	1.29
2011	4,785	0.129	139	3.9	229	118	25.5	26.1	-0.5	-2%	26.30	27.69	29.54	1.46	2.11	2.12	2.75	1.26	0.31	1.29
2010	333	0.119	66	4.0	217	130	30.2	31.1	-0.9	-3%	30.14	30.18	30.30	2.38	2.56	2.53	2.81	1.13	0.27	1.52
GNMA 2 30yr 4	154,228	0.193	23,969	4.4	296	58	40.3	41.8	-1.5	-4%	41.65	43.77	42.62	10.77	13.18	14.16	11.72	3.76	1.23	7.05
2021	827	0.983	470	4.4	355	4	5.7	6.5	-0.8	-13%	4.71	3.47	-	1.41	1.01	0.86	-	1.57	0.49	0.27
2020	4,646	0.670	2,450	4.4	342	17	36.3	34.9	1.4	4%	36.53	36.20	32.66	6.03	10.46	11.03	8.10	3.67	1.31	5.71
2019	32,637	0.335	5,551	4.5	329	28	48.4	49.8	-1.4	-3%	49.77	51.58	48.93	16.83	20.46	20.83	16.51	4.80	1.82	10.24
2018	29,416	0.207	2,215	4.5	317	39	47.7	49.9	-2.2	-4%	49.56	52.48	51.27	12.33	15.19	16.51	13.07	3.23	1.09	7.63
2017	27,230	0.260	5,439	4.4	304	51	41.0	42.8	-1.7	-4%	42.35	44.69	43.37	12.69	14.77	16.47	13.68	4.38	1.41	8.82
2016	7,851	0.233	2,753	4.4	292	62	35.5	37.8	-2.3	-6%	37.34	39.45	38.41	10.52	12.06	12.67	11.32	4.50	1.33	7.62
2015	13,210	0.181	2,362	4.4	279	73	34.7	34.5	0.2	1%	35.17	36.60	35.80	7.62	9.35	10.34	9.16	3.99	1.21	6.32
2014	15,469	0.134	1,278	4.4	262	87	30.7	30.8	-0.1	0%	30.91	31.80	31.14	5.64	6.63	7.14	6.73	3.38	0.93	4.45
2013	7,419	0.112	312	4.4	253	96	31.2	32.4	-1.3	-4%	31.41	32.54	32.29	4.48	5.38	5.64	5.59	2.52	0.67	2.99
2012	3,859	0.124	445	4.3	235	113	25.6	25.1	0.5	2%	26.02	26.74	26.34	2.79	4.12	4.66	5.07	2.36	0.59	1.72
2011	6,548	0.093	399	4.3	227	121	26.2	26.9	-0.7	-3%	26.92	27.79	28.33	2.09	2.69	3.14	3.65	2.00	0.49	1.61
2010	4,839	0.093	246	4.4	217	131	26.6	29.7	-3.1	-10%	28.63	29.38	30.35	1.93	2.48	2.67	3.14	1.56	0.36	0.98
2009	238	0.080	19	4.4	201	147	34.6	28.3	6.3	22%	30.04	30.69	30.70	0.89	3.50	3.28	3.47	1.73	0.17	1.18
2008	12	0.100	3	4.5	193	156	23.9	0.9	23.0	*n.m.	18.78	23.77	23.92	0.00	7.70	3.93	3.88	2.66	0.00	2.63
GNMA 2 30yr 4.5	70,755	0.152	17,499	4.9	289	65	38.9	41.8	-2.9	-7%	41.42	43.93	42.54	11.58	13.89	14.23	13.68	4.20	1.42	7.91
2021	109	0.979	76	4.9	355	4	10.7	7.4	3.3	45%	7.80	4.09	-	0.00	1.69	0.85	-	2.17	1.30	0.56
2020	1,162	0.594	959	4.9	341	17	38.1	40.2	-2.1	-5%	39.27	40.94	39.49	9.36	12.11	11.38	10.95	4.06	1.49	6.62
2019	9,582	0.416	4,685	5.0	329	29	42.6	47.3	-4.6	-10%	46.43	48.70	44.72	14.39	18.48	18.88	17.06	5.01	1.90	9.76
2018	28,639	0.228	5,902	4.9	319	37	46.3	49.2	-2.8	-6%	48.87	51.70	49.86	16.32	18.81	19.45	17.75	4.86	1.78	11.35
2017	5,928	0.232	2,407	4.9	306	50	39.6	43.0	-3.5	-8%	42.33	44.79	44.07	13.64	15.27	14.27	15.19	5.32	1.77	10.57
2016	1,784	0.189	494	4.9	293	61	40.5	41.9	-1.4	-3%	41.26	43.47	41.51	13.26	14.15	12.57	12.93	5.37	1.77	10.34
2015	810	0.250	849	4.8	276	73	29.6	27.9	1.7	6%	29.25	31.07	29.39	5.05	8.33	8.78	9.71	4.55	1.24	5.19
2014	2,958	0.142	570	4.8	261	88	30.7	29.7	1.0	3%	30.89	31.23	30.08	6.67	7.42	7.64	9.05	4.21	1.17	5.03
2013	3,671	0.121	168	4.8	252	96	27.0	29.9	-2.9	-10%	28.53	29.87	29.29	4.76	5.98	6.27	7.18	3.77	0.94	3.65
2012	181	0.113	44	4.9	240	110	27.1	34.2	-7.1	-21%	31.64	32.33	31.03	11.44	9.37	7.96	8.79	4.50	1.12	2.35
2011	5,985	0.077	511	4.8	223	125	24.2	27.0	-2.8	-10%	25.80	27.14	27.31	2.46	2.76	3.02	4.29	2.23	0.51	1.15
2010	5,742	0.076	417	4.9	214	135	25.8	26.5	-0.6	-2%	27.09	28.46	28.64	2.08	3.57	3.30	4.00	1.92	0.48	0.97
2009	4,043	0.060	152	4.9	203	145	26.2	27.7	-1.5	-5%	28.14	29.50	29.66	1.58	3.47	3.06	3.79	1.93	0.46	0.84
2008	29	0.038	26	5.0	191	158	23.7	15.9	7.9	49%	21.85	26.35	26.70	0.00	1.99	1.00	1.77	0.67	0.53	3.86
2007	12	0.071	18	5.0	180	169	10.4	7.2	3.2	44%	9.53	10.15	13.47	0.00	0.00	1.38	2.64	2.33	0.00	0.00
2006	10	0.156	57	5.0	165	184	18.4	0.7	17.7	*n.m.	19.31	19.15	15.96	0.00	0.00	5.27	2.98	1.85	0.00	0.00
2005	31	0.050	57	5.1	153	195	14.6	15.7	-1.2	-7%	20.39	20.70	19.84	2.29	4.04	3.59	3.68	1.80	0.29	2.61
2004	20	0.040	43	5.1	137	207	16.4	24.2	-7.8	-32%	21.34	21.61	20.04	4.67	1.58	1.64	2.14	1.44	0.00	0.61
2003	56	0.039	36	5.1	129	219	18.6	19.3	-0.7	-4%	19.74	19.30	18.73	1.68	1.56	1.22	1.91	1.99	0.36	0.50
GNMA 2 30yr 5	27,382	0.101	8,682	5.4	269	84	37.5	39.9	-2.4	-6%	39.78	42.13	40.08	11.51	14.40	15.08	14.49	4.57	1.53	8.00
2021	5	0.826	4	5.3	334	6	0.0	31.3	-31.2	*n.m.	11.76	60.34	-	0.00	0.00	0.00	-	0.00	0.00	0.00
2020	100	0.656	111	5.4	338	17	26.5	41.4	-14.9	-36%	36.88	38.49	37.72	7.72	10.83	9.37	6.82	5.45	1.64	9.90
2019	2,872	0.427	2,404	5.5	329	29	42.8	44.8	-2.0	-4%	44.72	47.47	43.15	12.73	16.28	17.61	16.99	5.11	1.89	11.27
2018	10,396	0.233	4,429	5.5	319	38	46.7	49.9	-3.2	-6%	49.80	52.08	48.71	17.83	21.83	22.69	20.36	5.52	2.03	13.34
2017	1,222	0.232	232	5.4	307	49	49.3	49.7	-0.4	-1%	50.14	52.67	50.82	19.93	22.83	22.84	23.13	7.42	2.72	12.45
2016	755	0.256	17	5.4	295	60	43.6	47.0	-3.5	-7%	45.85	48.76	48.09	19.43	20.76	20.12	20.84	7.62	3.35	12.44
2015	239	0.266	14	5.4	280	75	46.4	44.9	1.5	3%	44.58	44.60	40.99	24.97	20.63	16.59	16.69	8.44	2.90	9.26
2014	273	0.215	29	5.4	270	85	42.9	46.3	-3.4	-7%	43.70	45.01	41.23	19.35	17.65	15.91	14.85	7.20	2.10	10.67
2013	49	0.197	29	5.4	256	98	35.4	29.5	5.9	20%	37.29	37.89	32.34	14.43	22.39	18.60	14.51	7.81	3.78	8.23

VINING SPARKS

GNMA Prepayment Speeds
October 2021
GNMA2 30yr

	Indicative Data						Prepayment Speeds							Buyout Prepayment Component				Delinquencies		
	Cur Bal (MM)	*Factor*	*# of Pools*	*WAC*	*WAM*	*WALA*	Oct	Sep	Chg	% Chg	3mo	6mo	12mo	1mo	3mo	6mo	12mo	30D	60D	90D
2012	128	0.102	7	5.4	236	114	23.1	18.2	4.9	27%	27.56	29.14	28.29	3.97	5.77	6.97	8.23	5.36	1.59	2.10
2011	988	0.095	193	5.3	224	125	25.0	24.1	0.9	4%	25.48	26.63	25.68	3.65	5.25	6.08	7.55	4.88	1.18	2.55
2010	4,137	0.066	272	5.3	212	137	23.7	25.2	-1.5	-6%	25.02	26.21	25.96	2.39	3.92	3.93	4.89	2.75	0.69	1.14
2009	4,758	0.056	266	5.4	205	144	23.6	25.9	-2.3	-9%	24.85	26.40	26.19	2.33	3.76	3.88	4.35	2.53	0.56	1.25
2008	313	0.030	80	5.5	192	157	22.6	21.2	1.3	6%	23.05	25.01	25.09	1.79	3.81	3.79	5.13	3.84	0.76	1.70
2007	36	0.028	60	5.5	179	171	13.5	23.0	-9.5	-41%	19.53	24.26	22.52	0.00	0.56	2.72	4.18	1.62	0.63	2.08
2006	60	0.033	145	5.6	164	185	15.2	10.6	4.6	43%	14.33	19.07	18.12	0.00	2.82	2.69	3.01	2.23	0.74	0.98
2005	374	0.031	122	5.6	153	195	23.3	21.8	1.5	7%	22.39	22.17	20.65	1.56	2.06	2.33	2.94	2.24	0.38	0.89
2004	263	0.034	75	5.6	139	207	19.0	23.2	-4.2	-18%	20.76	20.22	19.36	2.46	2.85	2.81	3.27	2.97	0.62	0.59
2003	389	0.026	90	5.6	128	219	20.4	17.1	3.3	20%	19.08	19.19	18.67	1.64	2.35	2.26	2.84	1.98	0.44	0.59
2002	20	0.021	44	5.8	120	227	9.0	13.1	-4.1	-31%	12.65	14.98	18.00	0.00	0.00	0.62	1.53	1.94	0.00	0.55
GNMA 2 30yr 5.5	6,993	0.044	3,332	6.0	214	137	30.7	30.2	0.5	2%	30.10	31.06	30.04	6.39	7.50	8.16	9.52	4.46	1.30	5.72
2019	526	0.421	564	5.9	328	29	48.5	44.0	4.5	10%	46.58	46.15	41.35	6.07	10.56	11.33	14.11	4.84	1.76	11.08
2018	954	0.296	701	5.9	320	37	44.0	46.7	-2.7	-6%	43.86	46.00	43.44	13.90	14.30	14.69	16.38	5.64	2.06	15.27
2017	340	0.224	9	5.9	310	48	51.5	44.0	7.4	17%	46.76	48.83	47.34	15.33	16.23	20.79	21.00	8.04	2.51	19.19
2016	198	0.221	5	5.9	295	61	41.8	40.2	1.6	4%	40.87	43.93	42.63	17.07	18.27	16.99	18.71	7.70	2.90	17.85
2015	64	0.236	5	5.9	283	71	43.8	45.8	-2.1	-4%	45.01	45.03	42.33	19.81	25.65	22.49	17.94	7.79	1.99	17.87
2014	75	0.343	7	5.9	267	87	50.9	47.6	3.3	7%	44.54	41.36	42.20	21.09	17.22	18.38	17.01	8.32	2.34	8.44
2013	33	0.315	3	5.9	256	98	49.5	38.0	11.5	30%	43.00	43.81	45.66	11.39	14.90	17.97	18.50	9.97	1.46	8.73
2012	34	0.495	9	5.9	240	112	46.9	40.7	6.3	15%	42.07	42.01	45.59	14.41	21.57	21.43	24.31	10.64	7.01	3.60
2011	54	0.462	8	5.9	232	120	34.1	25.0	9.1	36%	30.05	30.92	36.97	16.14	20.15	20.18	23.26	10.21	7.23	2.77
2010	60	0.281	20	5.9	216	137	28.3	21.8	6.5	30%	25.22	29.30	29.97	14.42	12.11	13.67	12.84	8.58	3.43	6.31
2009	642	0.059	90	5.9	203	145	23.4	26.9	-3.5	-13%	23.51	23.94	22.96	3.51	3.67	3.97	4.79	3.78	0.59	1.78
2008	1,114	0.025	281	5.9	191	159	22.6	21.9	0.7	3%	23.24	24.16	23.26	2.95	4.02	4.40	5.63	3.62	0.84	1.61
2007	472	0.036	267	6.0	179	171	25.8	24.7	1.1	4%	24.86	24.52	23.41	3.46	4.77	4.63	5.97	4.57	1.16	1.90
2006	384	0.037	245	6.0	166	183	23.3	21.2	2.1	10%	22.67	21.66	22.06	1.73	3.70	4.23	5.28	4.46	0.82	1.67
2005	563	0.033	279	6.0	153	195	21.0	19.2	1.8	9%	20.17	20.33	19.97	2.14	2.80	3.46	4.15	2.86	0.75	0.74
2004	700	0.033	271	5.9	140	207	18.7	20.3	-1.6	-8%	19.02	19.06	18.37	2.60	2.67	2.99	3.63	3.29	0.67	0.81
2003	616	0.025	235	6.0	129	218	16.6	17.5	-0.9	-5%	17.61	17.42	17.43	1.42	1.57	2.07	3.33	2.44	0.56	0.92
2002	128	0.013	112	6.3	120	227	16.6	14.1	2.6	18%	16.68	17.30	17.54	1.50	1.65	2.16	2.59	1.83	0.42	0.51
2001	12	0.011	25	6.3	109	239	4.9	9.9	-5.0	-50%	13.79	12.49	15.24	0.00	2.36	3.41	3.57	1.59	0.00	1.32

**n.m. - Not Meaningful*

Source: Bloomberg

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VINING SPARKS

GNMA Prepayment Speeds
October 2021
GNMA2 JUMBO 15yr/30yr

	Indicative Data						Prepayment Speeds							Buyout Prepayment Component				Delinquencies		
	Cur Bal (MM)	*Factor*	*# of Pools*	*WAC*	*WAM*	*WALA*	Oct	Sep	Chg	% Chg	3mo	6mo	12mo	1mo	3mo	6mo	12mo	30D	60D	90D
GNMA 2 Jumbo 1.5	247	0.970	16	2.0	347	6	**1.3**	7.3	-6.0	**-83%**	4.49	3.26	1.92	3.04	1.02	0.51	0.26	0.00	0.00	0.50
2021	242	0.976	12	2.0	348	6	**1.3**	4.4	-3.1	***n.m.**	3.55	2.81	-	3.13	1.05	0.53	-	0.00	0.00	0.51
GNMA 2 Jumbo 2	21,239	0.941	35	2.4	351	7	**13.3**	10.9	2.4	**22%**	11.32	9.09	5.52	0.40	0.36	0.32	0.19	0.52	0.12	0.49
2021	12,101	0.976	15	2.4	353	5	**4.3**	3.9	0.4	***n.m.**	4.12	3.46	-	0.53	0.24	0.16	-	0.49	0.07	0.27
2020	9,136	0.897	15	2.4	347	11	**23.9**	18.2	5.7	**31%**	19.10	14.48	8.43	0.26	0.47	0.42	0.25	0.57	0.17	0.73
GNMA 2 Jumbo 2.5	14,915	0.652	108	2.9	348	9	**34.7**	38.5	-3.8	**-10%**	37.26	38.87	41.10	1.44	1.94	1.88	1.38	0.73	0.24	1.93
2021	6,717	0.984	9	2.9	356	3	**3.8**	3.5	0.2	***n.m.**	3.61	4.08	-	0.13	0.04	0.02	-	0.68	0.15	0.20
2020	7,848	0.554	20	2.9	345	13	**51.6**	52.7	-1.2	**-2%**	51.06	47.66	43.28	1.95	2.39	2.02	1.31	0.76	0.31	2.66
2019	241	0.177	8	3.0	334	23	**68.8**	64.6	4.2	**6%**	64.37	63.74	76.62	10.52	11.76	10.84	7.60	1.28	0.00	12.51
2016	46	0.202	20	2.9	204	61	**41.7**	40.7	0.9	**2%**	37.39	42.90	55.21	0.00	2.87	1.45	3.35	0.00	0.00	7.69
GNMA 2 Jumbo 3	6,797	0.151	173	3.4	308	46	**54.4**	54.8	-0.4	**-1%**	55.29	59.39	65.51	9.18	10.51	9.61	7.08	1.24	0.48	8.30
2021	707	0.950	7	3.4	355	3	**17.5**	10.9	6.7	**61%**	15.67	18.85	-	0.00	0.00	1.57	-	1.01	0.24	0.48
2020	1,248	0.340	16	3.4	342	16	**62.0**	63.5	-1.5	**-2%**	63.30	66.09	64.46	6.26	8.55	7.27	4.95	1.41	0.82	8.39
2019	1,097	0.149	14	3.5	334	24	**65.4**	66.6	-1.2	**-2%**	66.58	67.55	75.00	17.32	18.26	15.32	10.99	1.27	0.37	11.74
2018	49	0.131	12	3.5	313	43	**67.2**	56.8	10.4	**18%**	59.70	57.42	68.06	12.27	10.57	5.43	5.35	0.82	0.75	14.33
2017	338	0.109	20	3.5	302	50	**65.0**	62.1	3.0	**5%**	63.12	66.06	69.79	11.18	16.96	13.79	10.41	1.03	0.97	12.77
2016	2,108	0.116	18	3.4	293	61	**56.7**	53.2	3.5	**7%**	54.65	58.51	65.19	10.23	10.83	10.57	7.61	1.51	0.48	9.74
2015	448	0.088	20	3.4	274	76	**49.1**	52.0	-2.9	**-6%**	52.18	57.53	62.82	6.82	6.48	6.14	4.60	1.10	0.34	7.21
2014	64	0.086	11	3.4	265	82	**21.8**	39.2	-17.4	**-44%**	39.34	45.13	58.58	0.00	3.31	4.80	3.39	0.57	0.00	1.20
2013	353	0.123	21	3.4	246	101	**41.4**	44.5	-3.1	**-7%**	41.40	42.39	48.09	5.44	5.11	4.30	3.64	0.70	0.23	3.72
2012	381	0.128	25	3.4	229	107	**28.3**	32.7	-4.4	**-14%**	29.69	36.79	43.36	3.58	1.87	3.29	3.27	0.40	0.00	2.34
GNMA 2 Jumbo 3.5	4,644	0.088	163	3.9	294	60	**53.8**	61.5	-7.8	**-13%**	57.50	59.73	62.38	19.29	16.68	14.74	12.74	2.12	0.67	10.65
2021	85	0.951	7	3.9	353	6	**25.2**	16.9	8.3	**49%**	14.67	9.83	-	8.82	7.46	3.80	-	1.69	0.85	1.06
2020	209	0.371	13	3.9	342	16	**68.9**	77.5	-8.6	**-11%**	68.28	69.10	61.97	14.20	13.85	12.75	8.66	4.49	0.97	15.14
2019	532	0.120	17	4.0	332	25	**63.1**	80.9	-17.8	**-22%**	72.60	72.08	72.82	35.93	28.75	24.70	19.12	2.22	1.28	17.72
2018	230	0.094	15	4.0	314	41	**48.0**	61.7	-13.7	**-22%**	56.50	61.66	65.11	23.00	17.59	16.06	12.98	1.92	0.28	12.29
2017	1,127	0.101	15	3.9	307	50	**61.0**	63.5	-2.6	**-4%**	61.98	63.31	66.75	19.47	18.38	15.93	14.37	2.20	0.65	13.23
2016	837	0.101	14	3.9	294	62	**54.5**	61.7	-7.2	**-12%**	57.78	59.84	60.40	24.72	20.43	18.30	16.11	2.42	1.04	11.13
2015	759	0.068	14	3.9	281	74	**44.6**	48.7	-4.1	**-8%**	48.88	53.04	57.92	13.12	11.52	10.61	9.43	2.42	0.38	9.02
2014	220	0.045	16	3.8	268	84	**42.8**	51.5	-8.7	**-17%**	47.32	51.71	55.15	7.97	6.69	5.13	4.85	1.29	0.00	3.18
2013	178	0.073	19	3.8	248	100	**47.3**	38.5	8.8	**23%**	46.83	43.60	45.38	4.53	7.27	5.74	5.88	1.01	0.44	6.17
2012	436	0.066	17	3.8	236	111	**39.1**	40.4	-1.3	**-3%**	37.59	42.46	46.16	5.79	4.87	4.14	4.32	0.54	0.23	1.25
2011	30	0.057	10	3.9	218	118	**17.6**	66.4	-48.8	**-74%**	44.04	41.46	50.13	0.00	2.66	1.34	4.68	1.15	0.00	3.91
GNMA 2 Jumbo 4	1,587	0.065	151	4.4	303	53	**55.5**	56.2	-0.7	**-1%**	55.30	60.34	61.11	18.25	20.95	21.93	18.59	3.60	1.68	14.16
2021	56	0.887	5	4.5	353	6	**48.0**	38.4	9.6	**25%**	35.01	22.38	-	0.00	0.00	0.00	-	7.44	5.41	2.79
2020	103	0.445	13	4.5	344	14	**56.9**	70.0	-13.1	**-19%**	63.09	61.86	59.28	22.30	18.39	10.89	8.51	3.44	1.02	8.37
2019	233	0.144	13	4.5	332	26	**69.2**	61.7	7.4	**12%**	65.06	71.42	68.54	22.63	26.82	29.97	22.77	3.27	3.29	23.06
2018	392	0.067	13	4.5	319	39	**58.1**	66.0	-7.9	**-12%**	61.00	65.70	66.05	22.63	24.08	24.65	19.66	3.56	1.54	16.67
2017	350	0.097	13	4.4	307	51	**58.4**	55.5	2.9	**5%**	54.48	59.99	61.77	20.97	23.27	25.46	22.99	4.96	2.13	17.81
2016	62	0.070	10	4.4	294	62	**36.5**	59.1	-22.6	**-38%**	46.48	56.49	58.53	16.09	25.51	26.13	25.75	4.28	0.00	8.60
2015	115	0.048	13	4.4	280	74	**48.8**	41.9	7.0	**17%**	48.34	54.23	54.92	14.85	19.73	17.51	15.47	3.95	0.99	10.18
2014	60	0.024	12	4.3	265	86	**34.6**	31.4	3.2	**10%**	36.25	42.56	48.92	7.15	11.53	12.05	10.97	4.22	0.58	13.34
2013	30	0.022	9	4.4	261	95	**47.1**	31.1	16.0	**52%**	48.14	42.30	44.62	31.96	12.05	7.85	6.53	1.12	0.00	5.81
2012	30	0.031	12	4.3	234	113	**38.6**	30.3	8.3	**27%**	50.27	47.17	44.65	0.00	20.86	14.11	14.05	0.00	0.00	2.11
2011	56	0.027	16	4.3	227	120	**26.5**	31.7	-5.2	**-16%**	31.33	39.42	42.42	0.00	2.68	4.68	5.40	0.92	0.00	0.64
2010	92	0.034	15	4.4	219	132	**44.0**	29.1	14.9	**51%**	40.72	40.93	45.12	0.00	5.68	7.84	7.32	0.00	0.00	3.00
GNMA 2 Jumbo 4.5	425	0.055	110	4.9	303	54	**55.5**	47.7	7.8	**16%**	53.69	57.72	58.01	14.42	15.72	19.01	19.60	2.91	1.25	19.62
2021	10	0.943	5	4.9	354	6	**46.3**	0.0	46.3	***n.m.**	18.75	9.86	-	0.00	0.00	0.00	-	0.00	0.00	0.00
2020	29	0.566	7	4.9	344	15	**36.2**	44.6	-8.5	**-19%**	45.72	60.69	45.10	0.00	0.00	2.59	2.11	9.96	0.00	12.84
2019	101	0.155	17	5.0	332	27	**75.4**	67.8	7.6	**11%**	69.44	68.24	65.42	33.16	28.48	27.99	24.61	1.33	1.82	29.60
2018	164	0.082	13	5.0	321	37	**59.0**	47.2	11.7	**25%**	56.81	59.73	60.94	9.74	15.17	19.48	22.67	4.01	1.45	22.77
2017	13	0.062	9	4.9	305	50	**0.3**	36.4	-36.2	***n.m.**	47.58	68.55	64.97	0.00	12.08	39.74	29.08	4.38	3.44	27.78
2014	12	0.025	12	4.8	263	88	**0.2**	0.5	-0.3	***n.m.**	0.30	17.22	37.83	0.00	0.00	5.78	10.63	0.70	0.00	11.62
2011	30	0.019	12	4.8	220	125	**2.4**	28.5	-26.1	**-92%**	26.80	36.09	39.67	0.00	0.00	7.32	6.55	1.94	0.00	1.34
2010	43	0.023	13	4.9	220	133	**34.7**	8.7	26.0	**298%**	23.47	34.88	45.02	0.00	6.10	6.20	9.35	0.96	0.00	4.68
GNMA 2 Jumbo 5	85	0.030	69	5.5	276	80	**37.2**	62.4	-25.1	**-40%**	49.47	58.97	57.11	26.65	32.22	28.94	21.13	5.07	0.09	19.77
2010	14	0.017	10	5.4	215	137	**0.3**	53.1	-52.8	***n.m.**	35.40	39.79	41.03	32.49	20.45	14.00	8.77	3.93	0.00	7.26
2009	14	0.013	13	5.4	208	145	**0.4**	63.3	-62.9	***n.m.**	34.48	39.09	26.25	24.46	16.60	12.64	10.18	0.00	0.00	3.03

**n.m. - Not Meaningful*

Source: Bloomberg

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