



Santander US Capital Markets LLC

Single Family Fixed Rate Prepayment Report

November 2023 (October Speeds)

Agency MBS Strategy

Brian R. Landy, CFA

brian.landy@santander.us

646-776-7795

www.santandercib.com/sancap

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Overview

Product	Agency	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
Fixed 30	FNMA	2,989,661	3.875	311	41	230	4.8	5.1	6.0	5.3	5.7	5.1	-5.0	-16.2
	FHLMC	2,390,847	3.876	315	38	243	4.7	4.8	5.9	5.2	5.5	4.9	-3.3	-18.8
	GNMA I	56,011	4.692	210	139	88	5.8	6.2	7.1	6.4	6.7	6.6	-6.4	-12.6
	GNMA II	2,125,345	3.886	317	38	213	5.4	6.0	7.5	6.3	6.9	6.3	-10.9	-20.1
Fixed 20	FNMA	154,071	3.262	187	48	164	4.4	4.7	5.5	4.9	5.2	4.8	-4.9	-15.9
	FHLMC	120,092	3.224	192	44	174	4.2	4.3	5.5	4.7	5.0	4.5	-4.0	-21.3
Fixed 15	FNMA	411,378	2.846	130	44	133	5.7	5.9	6.9	6.2	6.5	6.1	-3.5	-14.4
	FHLMC	324,119	2.876	133	42	141	5.6	5.9	6.9	6.1	6.4	6.0	-4.3	-14.8
	GNMA I	1,009	3.687	41	138	26	15.0	15.1	15.9	15.3	15.5	14.8	-0.9	-5.5
	GNMA II	18,083	3.131	118	56	86	8.9	9.1	10.8	9.6	9.9	9.4	-1.7	-16.7
Fixed 10	FNMA	22,221	2.600	82	33	105	7.5	7.6	8.3	7.8	8.1	7.8	-0.4	-9.1
	FHLMC	9,768	2.594	86	30	120	6.4	6.6	8.1	7.1	7.3	6.9	-4.0	-18.7

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

Fixed 30, by Coupon

Agency	Coupon	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
FNMA	≤ 1.5	78,875	2.504	321	33	334	2.7	2.8	3.4	3.0	3.4	3.0	-3.7	-17.7
	2.0	875,537	2.877	323	27	296	3.5	3.8	4.6	3.9	4.3	3.8	-8.9	-18.1
	2.5	635,832	3.302	323	31	260	4.5	4.7	5.7	5.0	5.4	4.7	-5.7	-17.7
	3.0	371,297	3.706	289	62	204	5.2	5.4	6.5	5.7	6.1	5.6	-3.4	-17.2
	3.5	273,615	4.122	277	73	177	5.7	5.9	7.1	6.2	6.7	6.3	-3.7	-17.8
	4.0	229,529	4.657	285	65	170	6.0	6.4	7.6	6.6	7.1	6.7	-6.1	-16.3
	4.5	146,797	5.211	300	53	183	6.1	6.3	7.0	6.5	6.8	6.5	-2.7	-10.2
	5.0	129,284	5.819	321	34	218	5.9	5.7	6.7	6.1	6.3	6.2	4.3	-15.9
	5.5	115,369	6.357	327	29	221	6.2	6.2	7.1	6.5	6.8	6.9	-0.4	-11.9
≥ 6.0	133,527	7.085	332	24	210	8.0	8.3	9.6	8.5	9.3	9.3	-3.6	-13.6	
FHLMC	≤ 1.5	112,575	2.530	321	33	332	2.7	2.9	3.9	3.2	3.5	3.1	-8.1	-25.7
	2.0	715,373	2.897	324	30	304	3.4	3.6	4.7	3.9	4.3	3.7	-5.7	-22.3
	2.5	495,323	3.293	324	30	261	4.5	4.7	5.7	5.0	5.3	4.7	-6.0	-17.5
	3.0	276,515	3.730	293	58	205	5.1	5.2	6.6	5.7	6.0	5.5	-1.3	-22.0
	3.5	191,272	4.149	281	69	182	5.7	5.9	7.1	6.3	6.7	6.3	-3.0	-17.0
	4.0	154,273	4.684	292	60	184	5.9	6.0	7.2	6.4	6.7	6.3	-3.2	-16.1
	4.5	113,191	5.233	307	47	197	5.7	5.8	6.8	6.1	6.4	6.1	-1.4	-14.5
	5.0	110,885	5.826	326	29	230	5.5	5.5	6.4	5.8	6.1	6.0	-1.3	-13.8
	5.5	104,988	6.374	335	21	243	5.8	6.0	7.6	6.5	7.0	6.9	-2.9	-21.7
≥ 6.0	116,450	7.066	338	18	224	7.8	7.9	9.7	8.4	9.1	9.1	-1.1	-18.9	
GNMA I	≤ 1.5	44	2.266	316	42	122	6.7	4.9	9.2	7.0	4.1	3.4	37.4	-47.5
	2.0	372	2.690	305	51	117	5.5	5.8	7.1	6.1	5.7	4.4	-4.6	-19.3
	2.5	1,853	3.078	274	77	132	3.8	5.0	5.0	4.6	5.2	4.7	-24.3	-0.0
	3.0	10,007	3.517	239	110	119	5.2	5.8	5.9	5.6	6.0	5.9	-10.2	-2.7
	3.5	9,178	4.037	225	122	105	5.9	6.3	7.2	6.5	6.8	6.6	-6.0	-12.7
	4.0	9,851	4.527	217	132	101	5.7	6.2	7.2	6.4	6.7	6.6	-7.6	-14.5
	4.5	9,621	5.009	194	155	93	5.9	6.5	7.8	6.7	7.0	6.9	-9.4	-16.9
	5.0	6,943	5.514	181	168	75	6.2	6.2	7.4	6.6	7.0	7.0	0.7	-17.2
	5.5	3,537	6.019	171	179	63	5.9	6.6	6.9	6.5	6.9	7.3	-10.9	-5.2
≥ 6.0	4,606	6.833	174	177	48	7.1	6.6	7.9	7.2	7.5	7.7	6.7	-17.0	
GNMA II	≤ 1.5	5,483	1.980	324	29	298	5.2	3.9	5.4	4.8	4.8	4.3	34.5	-28.9
	2.0	370,017	2.419	324	29	282	4.8	5.4	6.8	5.7	6.5	5.8	-11.5	-20.9
	2.5	460,984	2.936	324	30	236	6.0	6.2	7.6	6.6	7.2	6.5	-2.4	-18.9
	3.0	338,158	3.433	302	52	188	5.9	6.6	8.3	6.9	7.7	7.0	-11.7	-20.3
	3.5	257,066	3.908	285	68	157	6.2	6.9	8.7	7.3	7.8	7.3	-11.0	-21.1
	4.0	168,287	4.457	299	56	165	6.0	6.7	8.2	7.0	7.4	6.7	-11.8	-18.7
	4.5	135,805	4.991	318	38	198	5.1	5.7	6.8	5.9	6.2	5.6	-11.9	-16.0
	5.0	130,800	5.541	335	23	236	4.1	4.8	5.4	4.7	5.1	4.8	-15.8	-11.2
	5.5	109,477	6.058	345	13	263	3.8	3.8	4.8	4.1	5.0	4.7	0.4	-20.9
≥ 6.0	149,266	6.819	348	10	248	4.3	6.4	9.0	6.3	5.9	5.1	-33.2	-29.8	

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

Fixed 30, by Issue Year

Agency	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
FNMA	2023	376,294	5.413	343	3	321	5.3	6.1	7.0	5.9	6.3	6.3	-14.3	-12.4
	2022	496,189	4.490	340	17	306	4.5	4.7	5.4	4.8	5.1	4.5	-4.6	-13.6
	2021	858,944	3.027	327	28	277	3.9	4.2	5.0	4.4	4.7	4.1	-6.1	-17.0
	2020	608,425	3.189	314	38	255	4.4	4.6	5.7	4.9	5.4	4.8	-5.6	-19.3
	2019	109,732	4.194	300	51	197	6.5	6.6	7.9	7.0	7.8	7.3	-2.2	-16.7
	2018	60,482	4.683	286	65	167	7.3	7.6	9.4	8.1	8.8	8.5	-4.3	-19.3
	2017	72,487	4.222	273	76	165	6.6	6.6	8.0	7.1	7.7	7.3	1.6	-18.6
	2016	88,889	3.846	261	87	168	5.7	5.9	7.3	6.3	6.8	6.4	-3.0	-20.0
	2015	53,690	4.125	247	100	153	5.9	6.4	7.3	6.6	7.1	6.8	-7.8	-12.2
	2014	29,321	4.537	233	113	131	6.8	6.7	8.4	7.3	7.7	7.4	0.3	-20.0
	2013	78,664	3.852	220	125	141	5.7	5.6	6.7	6.0	6.4	6.1	1.5	-16.3
	2012	68,627	3.904	209	135	136	5.6	6.2	7.1	6.3	6.6	6.3	-9.2	-13.6
	2011	22,478	4.633	196	148	115	6.9	7.0	7.9	7.2	7.6	7.3	-1.1	-12.0
	2010	18,207	4.804	185	159	113	7.4	7.1	8.3	7.6	7.9	7.6	3.6	-14.7
	2009	17,876	5.089	166	179	93	7.6	7.8	8.7	8.0	8.2	8.1	-2.4	-11.1
	2008	4,352	6.159	159	189	87	8.2	7.0	8.3	7.9	8.4	8.5	17.7	-16.2
2007	4,349	6.488	151	197	82	7.8	8.0	8.5	8.1	8.6	8.4	-2.8	-5.6	
2006	3,028	6.520	140	209	74	7.2	8.6	9.3	8.4	8.9	8.8	-16.4	-8.6	
2005	4,548	5.912	128	220	70	8.2	8.0	9.3	8.5	8.8	8.7	2.3	-14.3	
≤ 2004	13,081	6.061	104	246	50	8.7	8.8	9.7	9.1	9.3	9.2	-0.9	-9.5	
FHLMC	2023	231,264	6.539	353	4	315	6.0	6.0	7.2	6.4	6.7	6.7	-1.0	-17.1
	2022	442,250	4.469	340	17	301	4.4	4.5	5.3	4.7	4.9	4.4	-2.6	-16.2
	2021	804,898	3.007	327	28	282	3.9	4.1	5.1	4.4	4.7	4.0	-4.6	-20.9
	2020	479,313	3.148	315	38	263	4.2	4.4	5.5	4.7	5.2	4.7	-5.5	-20.8
	2019	85,186	4.173	299	52	196	6.3	6.8	8.3	7.1	7.8	7.2	-8.3	-18.9
	2018	40,693	4.656	284	66	165	7.5	7.5	9.5	8.1	8.7	8.4	-0.1	-21.7
	2017	53,090	4.197	273	76	170	6.6	6.8	8.2	7.2	7.7	7.3	-3.5	-17.6
	2016	62,151	3.875	261	87	175	5.8	5.8	7.1	6.3	6.7	6.3	0.9	-19.5
	2015	39,658	4.091	245	101	154	5.8	5.9	7.3	6.4	6.9	6.6	-1.1	-20.1
	2014	20,258	4.468	233	112	135	6.3	6.9	7.8	7.0	7.5	7.3	-8.9	-11.6
	2013	45,387	3.821	219	126	141	5.4	5.7	6.6	5.9	6.2	6.0	-6.5	-13.4
	2012	33,565	3.925	208	135	132	5.8	5.8	6.9	6.2	6.5	6.2	-1.0	-16.2
	2011	11,214	4.642	195	149	118	6.8	6.8	8.5	7.4	7.6	7.5	-0.4	-20.3
	2010	12,114	4.882	185	159	109	7.3	7.2	8.7	7.7	8.1	7.7	1.1	-17.5
	2009	10,485	5.003	173	172	104	7.5	7.0	8.6	7.7	8.2	8.1	6.6	-19.3
	2008	2,902	6.106	160	188	86	7.6	8.2	9.4	8.4	8.5	8.4	-7.3	-14.1
2007	3,152	6.414	150	198	74	8.0	7.1	9.2	8.1	8.5	8.4	12.8	-23.9	
2006	2,254	6.426	139	209	71	9.3	8.9	9.5	9.2	9.1	8.7	4.3	-6.4	
2005	3,522	5.840	128	221	68	8.5	7.7	9.4	8.6	8.7	8.5	11.5	-19.3	
≤ 2004	7,490	6.083	102	247	47	9.3	8.7	10.3	9.5	9.6	9.4	7.7	-16.4	

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

Fixed 30, by Issue Year

Agency	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
GNMA I	2023	1,459	6.576	354	5	207	1.8	0.6	3.8	2.0	1.9	1.6	218.7	-85.0
	2022	1,563	4.786	342	16	183	3.5	2.8	4.6	3.6	3.6	3.1	29.2	-40.2
	2021	1,096	3.280	329	27	150	4.5	5.6	4.0	4.7	4.2	3.5	-18.6	38.2
	2020	1,458	3.590	314	41	165	4.8	5.4	5.8	5.3	6.0	6.1	-11.5	-6.8
	2019	1,204	4.178	304	51	143	4.1	4.7	6.0	4.9	6.4	6.2	-13.6	-22.9
	2018	738	4.499	289	65	116	5.4	4.1	8.1	5.9	6.2	5.8	32.3	-50.3
	2017	1,188	4.341	278	76	123	7.4	5.2	7.3	6.7	7.6	6.8	43.4	-28.9
	2016	1,141	3.991	264	88	107	5.4	6.6	6.6	6.2	6.4	6.0	-18.9	-0.4
	2015	2,065	4.085	249	101	108	6.2	6.9	6.8	6.6	6.8	6.8	-10.8	2.0
	2014	958	4.248	236	113	87	4.8	7.0	7.1	6.3	6.0	6.3	-32.0	-2.3
	2013	6,776	3.609	220	126	105	5.7	5.9	6.7	6.1	6.4	6.2	-4.0	-11.9
	2012	6,545	3.822	211	136	102	6.4	6.0	6.6	6.3	6.6	6.4	8.4	-10.4
	2011	5,399	4.518	199	148	95	5.1	6.6	7.7	6.5	6.7	6.6	-22.4	-14.8
	2010	7,791	4.871	189	160	94	5.2	6.5	7.4	6.4	6.9	6.9	-20.8	-12.6
	2009	8,944	5.226	176	171	88	6.2	6.5	7.6	6.8	7.1	7.1	-5.2	-14.9
	2008	1,848	6.178	165	184	73	6.8	6.8	7.3	7.0	7.2	7.2	0.2	-7.9
	2007	583	6.414	153	196	64	5.3	6.6	6.8	6.3	6.8	6.9	-20.6	-2.8
2006	582	6.292	140	209	58	7.7	8.4	6.2	7.5	7.6	7.7	-8.7	36.4	
2005	772	5.837	127	221	52	7.2	7.3	7.5	7.3	7.5	7.5	-1.9	-2.9	
≤ 2004	3,901	6.288	96	253	36	8.7	8.5	9.1	8.7	8.9	8.7	3.2	-6.9	
GNMA II	2023	300,844	6.142	353	5	298	3.0	3.7	3.5	3.4	3.1	2.8	-19.5	6.6
	2022	437,933	4.307	341	17	274	5.5	5.7	7.7	6.3	6.6	5.1	-3.5	-26.7
	2021	601,974	2.807	326	28	245	5.5	6.0	7.3	6.3	6.9	6.1	-8.4	-18.9
	2020	331,218	3.029	315	39	222	5.7	6.6	8.4	6.9	7.9	7.3	-13.9	-22.2
	2019	85,873	4.070	303	52	174	7.0	8.0	10.1	8.4	9.5	9.0	-13.0	-20.8
	2018	51,110	4.511	287	67	146	7.4	8.3	10.4	8.7	9.5	9.2	-11.3	-21.7
	2017	67,994	3.975	275	77	145	6.7	7.8	9.3	7.9	8.6	8.2	-14.8	-17.3
	2016	73,585	3.665	263	88	141	6.1	7.3	8.6	7.4	8.0	7.7	-17.6	-15.9
	2015	46,240	3.893	250	101	127	6.4	7.2	8.7	7.4	7.9	7.6	-10.6	-18.2
	2014	24,244	4.176	235	113	108	6.4	7.1	8.4	7.3	7.7	7.4	-10.0	-16.4
	2013	39,561	3.647	220	126	116	5.7	6.1	7.2	6.3	6.8	6.5	-5.7	-16.9
	2012	32,103	3.755	210	135	113	5.7	6.2	7.3	6.4	6.7	6.5	-8.5	-14.7
	2011	11,439	4.528	198	148	95	6.3	6.5	7.7	6.9	7.1	6.9	-3.4	-15.7
	2010	10,299	4.926	187	161	93	5.6	6.7	7.3	6.6	6.9	6.8	-17.8	-8.3
	2009	5,227	5.239	177	171	89	6.3	7.1	8.0	7.1	7.3	7.3	-11.4	-11.9
	2008	1,531	6.261	164	184	73	6.7	6.9	7.8	7.1	7.5	7.5	-3.9	-12.1
	2007	707	6.478	153	196	66	7.1	7.5	8.9	7.8	8.2	7.7	-5.9	-17.0
2006	533	6.333	139	209	59	6.2	7.0	9.1	7.5	7.8	7.8	-12.1	-23.5	
2005	756	5.891	127	220	54	6.7	7.0	7.5	7.1	7.6	7.8	-3.7	-7.1	
≤ 2004	2,175	6.299	101	248	39	8.8	8.2	9.0	8.7	8.9	8.8	8.1	-9.8	

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

FNMA, Fixed 30, Largest Cohorts

Coupon	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
1.5	2021	40,476	2.481	323	31	340	2.6	2.7	3.2	2.8	3.3	2.8	-4.2	-16.5
	2020	37,654	2.530	318	35	328	2.9	3.0	3.6	3.2	3.6	3.2	-2.7	-18.3
2.0	2023	94,654	2.887	323	0	171	3.4	0.3	0.4	3.4	3.4	3.4	1159.9	-35.5
	2022	49,596	2.934	336	21	348	2.7	3.0	3.6	3.1	3.3	2.9	-9.6	-17.2
	2021	457,531	2.845	327	28	299	3.4	3.7	4.5	3.9	4.2	3.6	-9.3	-16.9
	2020	273,560	2.917	315	36	284	3.7	4.0	5.0	4.3	4.7	4.2	-7.4	-20.0
2.5	2022	80,955	3.324	337	20	322	3.5	3.8	4.5	4.0	4.3	3.7	-8.1	-15.1
	2021	310,053	3.246	329	27	257	4.6	4.8	5.7	5.0	5.3	4.6	-5.0	-15.7
	2020	213,107	3.362	313	39	248	4.6	5.0	6.2	5.3	5.8	5.2	-6.6	-20.6
	2019	12,689	3.478	304	48	284	4.9	4.6	5.8	5.1	5.5	5.0	6.4	-21.0
3.0	2022	69,564	3.736	338	19	297	3.8	4.3	5.1	4.4	4.6	4.0	-10.9	-16.3
	2021	44,653	3.671	329	27	205	5.6	5.2	6.7	5.8	6.4	5.6	6.2	-22.5
	2020	65,614	3.793	311	41	199	6.0	6.1	7.2	6.5	6.8	6.4	-1.0	-15.6
	2019	45,812	3.858	301	50	221	5.5	5.8	7.2	6.2	6.9	6.3	-5.5	-20.0
	2016	53,971	3.635	262	86	195	5.4	5.5	6.8	5.9	6.4	5.9	-2.6	-19.9
	2015	11,310	3.764	245	101	189	5.5	5.6	6.0	5.7	6.2	5.9	-3.3	-6.6
	2013	44,036	3.569	218	126	158	5.4	5.4	6.2	5.7	5.9	5.7	0.4	-13.5
2012	26,316	3.576	211	132	159	4.9	5.6	6.4	5.6	6.0	5.6	-13.0	-14.1	
3.5	2022	63,105	4.183	340	18	300	3.9	4.4	5.5	4.6	4.8	4.1	-12.3	-20.2
	2019	26,604	4.340	300	51	186	6.7	7.1	8.3	7.4	8.4	7.9	-5.3	-15.2
	2018	12,408	4.074	281	68	198	5.5	5.9	7.6	6.4	7.0	6.8	-6.4	-23.4
	2017	34,156	4.032	274	75	180	6.3	6.0	7.5	6.6	7.3	6.9	4.6	-19.4
	2016	23,438	4.053	260	88	148	6.0	6.1	7.9	6.7	7.2	6.9	-1.9	-23.1
	2015	31,084	4.093	248	99	160	5.8	6.4	7.0	6.4	7.0	6.7	-10.0	-9.1
	2013	19,735	4.005	220	125	129	6.1	5.6	6.9	6.2	6.6	6.3	8.5	-18.6
2012	30,011	3.993	208	136	133	6.0	6.5	7.4	6.7	6.9	6.5	-7.9	-12.0	
4.0	2023	17,140	4.844	344	2	365	3.7	2.6	2.5	3.3	3.1	3.1	41.3	4.8
	2022	65,249	4.811	341	16	314	4.3	4.7	5.3	4.7	4.9	4.2	-8.6	-11.9
	2019	15,140	4.794	298	53	161	7.9	8.1	9.3	8.4	9.3	8.8	-1.4	-13.4
	2018	26,672	4.607	286	64	182	7.0	7.6	9.2	7.9	8.7	8.2	-8.6	-17.8
	2017	24,664	4.467	274	76	152	6.9	7.2	8.7	7.6	8.3	8.0	-3.6	-18.5
	2014	16,200	4.583	234	113	131	6.8	6.6	8.4	7.2	7.7	7.4	2.7	-21.9
4.5	2023	15,620	5.405	350	5	348	3.6	3.4	3.8	3.6	3.7	3.5	6.0	-10.5
	2022	67,927	5.340	343	14	308	4.7	5.1	5.5	5.1	5.2	4.6	-7.9	-6.1
	2018	16,492	5.079	288	63	143	8.8	8.6	10.7	9.4	10.0	9.7	1.6	-19.8
5.0	2023	55,366	5.950	352	5	334	4.5	4.3	5.2	4.6	4.8	4.8	4.9	-18.5
	2022	51,296	5.799	343	13	283	6.3	5.9	6.7	6.3	6.2	5.5	6.8	-11.6
5.5	2023	73,596	6.451	353	4	320	5.6	5.9	6.9	6.1	6.3	6.4	-5.3	-14.8
	2022	29,116	6.274	344	12	279	7.0	6.2	6.6	6.6	6.9	6.5	12.4	-5.3
6.0	2023	58,806	6.909	354	4	312	6.7	7.2	8.0	7.2	7.9	8.0	-7.7	-10.8
	2022	12,680	6.842	345	11	272	8.0	7.3	8.3	7.9	9.0	8.7	9.7	-12.9
6.5	2023	38,050	7.374	355	3	311	9.3	9.7	11.5	10.0	10.7	10.8	-4.4	-16.7

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

FHLMC, Fixed 30, Largest Cohorts

Coupon	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
1.5	2021	66,298	2.519	323	31	340	2.7	2.9	3.8	3.1	3.5	3.1	-8.7	-23.6
	2020	45,805	2.545	318	35	321	2.7	2.9	4.0	3.2	3.6	3.2	-8.1	-28.5
2.0	2023	15	2.797	349	7	351	0.4	0.0	0.1	0.2	7.8	6.0	1049.7	-43.4
	2022	49,104	2.952	336	20	349	2.7	3.0	3.8	3.2	3.3	2.8	-9.4	-21.0
	2021	430,521	2.873	327	28	312	3.4	3.6	4.6	3.8	4.2	3.6	-4.4	-22.6
	2020	235,720	2.928	316	36	285	3.7	4.0	5.0	4.2	4.7	4.2	-7.3	-22.0
2.5	2022	72,440	3.324	337	20	318	3.4	3.9	4.5	4.0	4.2	3.6	-12.7	-13.7
	2021	267,360	3.232	329	26	254	4.6	4.8	5.9	5.1	5.4	4.6	-4.3	-18.7
	2020	142,349	3.379	313	39	252	4.7	5.0	5.9	5.2	5.7	5.2	-5.7	-16.5
	2019	11,069	3.482	303	49	279	4.4	5.3	6.4	5.4	5.8	5.2	-17.6	-18.2
3.0	2022	63,118	3.736	338	19	280	3.8	4.1	5.5	4.5	4.6	3.9	-5.1	-26.3
	2021	35,222	3.633	328	26	185	5.7	5.7	7.3	6.2	6.5	5.7	-0.5	-21.6
	2020	42,872	3.840	310	43	208	5.8	5.6	7.5	6.3	6.8	6.4	3.9	-26.2
	2019	37,137	3.885	299	52	218	6.0	6.0	7.5	6.5	7.0	6.5	0.7	-21.1
	2016	39,288	3.698	262	86	196	5.3	5.5	6.8	5.9	6.4	5.9	-3.8	-18.4
	2015	10,641	3.741	244	102	185	5.2	5.1	6.8	5.7	6.1	5.7	0.7	-24.7
	2013	26,587	3.561	218	127	155	4.8	5.2	6.1	5.4	5.7	5.6	-8.2	-13.6
2012	12,836	3.604	211	132	154	5.1	5.3	6.2	5.5	5.9	5.6	-3.9	-14.8	
3.5	2022	50,054	4.220	340	18	288	4.5	4.3	5.3	4.7	4.9	4.2	4.7	-18.9
	2019	18,416	4.342	299	52	191	6.3	7.3	9.0	7.5	8.4	7.9	-13.6	-19.6
	2018	8,957	4.125	279	70	191	5.9	6.1	8.0	6.7	7.4	7.1	-3.5	-23.7
	2017	25,815	4.053	273	75	183	6.1	6.6	7.8	6.8	7.4	7.0	-6.4	-16.5
	2016	15,854	4.094	260	89	155	6.5	6.2	7.5	6.7	7.2	7.0	4.2	-18.1
	2015	21,972	4.101	246	100	158	5.7	6.0	6.9	6.2	6.9	6.7	-4.0	-14.7
	2013	12,213	3.998	220	124	130	5.8	6.0	7.2	6.4	6.6	6.4	-2.4	-18.0
2012	15,671	3.993	207	136	129	6.2	6.1	7.0	6.4	6.8	6.4	1.9	-14.0	
4.0	2023	3,088	4.916	350	7	367	3.2	3.0	3.0	3.1	3.2	3.2	7.1	1.5
	2022	61,128	4.836	341	15	314	4.1	4.3	4.7	4.4	4.6	4.0	-5.9	-8.5
	2019	10,322	4.742	297	54	161	7.3	8.1	9.9	8.5	9.1	8.6	-10.2	-18.6
	2018	17,098	4.607	285	65	181	7.6	7.4	9.4	8.1	8.8	8.4	1.9	-21.6
	2017	15,895	4.469	274	76	158	7.3	7.5	9.0	7.9	8.4	8.0	-1.9	-17.4
	2014	10,744	4.592	234	112	131	6.4	6.8	7.8	7.0	7.4	7.3	-7.4	-13.0
4.5	2023	11,276	5.464	351	6	363	2.8	3.3	3.2	3.1	3.5	3.4	-14.6	2.9
	2022	60,430	5.347	342	14	311	4.9	4.7	5.4	5.0	5.0	4.5	3.9	-12.9
	2018	11,274	5.021	286	63	143	8.2	8.1	10.0	8.8	9.3	9.1	0.8	-20.1
5.0	2023	48,345	5.961	352	5	330	4.2	4.4	5.0	4.5	4.9	4.8	-4.3	-11.3
	2022	46,768	5.791	343	13	283	5.7	5.6	6.3	5.9	6.0	5.5	3.1	-11.8
5.5	2023	74,132	6.458	353	4	318	5.4	5.7	7.4	6.1	6.7	6.7	-5.6	-23.1
	2022	23,242	6.232	344	12	267	6.4	6.3	7.6	6.8	7.0	6.6	2.3	-18.2
6.0	2023	58,087	6.907	354	3	301	7.1	7.0	9.2	7.7	8.2	8.2	0.7	-24.6
	2022	11,139	6.810	344	11	264	7.0	7.0	8.3	7.4	8.6	8.5	-0.3	-16.0
6.5	2023	30,779	7.387	354	3	296	8.7	9.3	10.7	9.4	10.0	10.1	-6.3	-14.0

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

GNMA I, Fixed 30, Largest Cohorts

Coupon	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
2.0	2022	39	2.678	335	21	150	8.6	0.3	11.4	6.9	5.0	3.7	2571.0	-97.2
	2021	215	2.664	330	27	136	2.5	6.8	5.8	5.1	5.0	3.4	-63.6	16.6
	2020	28	2.746	321	36	122	6.9	0.1	7.5	4.9	4.1	4.4	5835.9	-98.4
2.5	2022	143	3.188	338	21	165	6.4	6.3	5.4	6.0	4.5	3.2	1.3	18.6
	2021	372	3.172	329	28	148	3.5	2.8	2.9	3.1	3.4	3.0	28.1	-5.5
	2020	322	3.053	314	39	145	1.2	2.2	6.4	3.3	4.2	3.8	-45.8	-66.1
3.0	2022	203	3.592	338	20	164	0.1	0.9	0.5	0.5	2.0	1.6	-92.4	55.5
	2021	361	3.504	328	28	148	3.6	4.1	1.7	3.1	3.4	3.2	-12.4	148.8
	2020	728	3.526	315	42	178	6.4	6.3	6.1	6.2	6.3	6.8	1.1	4.2
	2019	365	3.536	306	48	152	3.3	4.4	5.6	4.5	5.9	6.7	-25.1	-22.2
	2017	156	3.549	275	77	102	5.3	5.1	3.5	4.6	5.0	4.6	3.4	46.6
	2016	314	3.509	265	87	105	3.8	6.4	6.4	5.5	5.5	5.2	-41.0	1.0
	2015	599	3.507	249	101	124	4.6	7.6	5.6	6.0	6.1	6.3	-39.6	35.7
	2013	4,446	3.502	221	127	113	5.3	5.8	6.3	5.8	6.2	6.1	-8.7	-9.4
2012	2,601	3.522	213	133	113	5.8	6.0	6.2	6.0	6.3	5.9	-3.7	-3.3	
3.5	2022	116	4.131	341	17	171	0.1	2.8	3.4	2.1	2.5	1.7	-96.7	-16.1
	2021	34	4.000	330	28	157	9.2	12.5	0.0	7.3	4.6	4.0	-27.7	
	2020	237	4.008	315	42	161	6.1	8.0	3.5	5.9	6.4	5.9	-23.8	134.6
	2019	292	4.023	306	50	159	5.1	5.1	2.9	4.3	7.7	6.9	0.4	75.1
	2018	217	4.033	288	66	116	4.3	3.4	7.0	4.9	6.3	5.8	28.5	-53.1
	2017	403	4.006	279	75	124	8.9	6.3	5.7	7.0	7.6	6.6	43.8	9.7
	2016	238	4.006	264	88	112	5.2	3.0	5.2	4.5	5.6	5.6	76.8	-43.8
	2015	581	4.004	248	102	106	5.8	6.7	6.8	6.4	6.4	6.7	-15.1	-1.3
	2014	313	4.010	239	112	94	4.9	6.9	5.6	5.8	5.0	5.5	-28.6	22.8
	2013	1,375	4.001	218	125	90	6.0	5.8	7.9	6.6	6.5	6.4	4.1	-28.0
2012	3,345	4.009	209	138	98	7.2	6.0	7.0	6.7	6.9	6.7	21.0	-14.8	
4.0	2022	292	4.558	341	18	213	4.6	2.6	6.9	4.7	5.4	4.9	82.1	-63.3
	2019	243	4.519	303	52	136	3.0	7.9	9.2	6.7	7.3	5.9	-63.5	-13.8
	2018	252	4.554	289	65	116	3.7	5.1	8.9	5.9	5.6	5.5	-28.7	-43.2
	2017	288	4.503	278	77	133	7.9	3.3	8.2	6.5	7.3	7.0	148.3	-61.3
	2014	498	4.500	234	113	83	4.6	7.4	7.8	6.6	6.4	6.8	-39.1	-5.4
4.5	2023	16	5.223	351	7	183	0.1	0.2	0.2	0.2	0.2	0.2	-27.4	1.4
	2022	236	5.068	344	15	186	0.2	5.3	4.5	3.3	2.9	1.8	-96.5	19.8
	2018	127	5.056	292	63	113	8.9	4.0	10.9	8.0	7.5	6.4	124.1	-64.2
5.0	2023	111	5.678	352	6	162	2.0	0.1	0.2	0.7	0.6	0.5	2256.2	-47.9
	2022	265	5.536	344	14	202	6.3	1.4	5.5	4.4	4.3	3.2	348.0	-74.3
5.5	2023	423	6.078	354	5	210	1.9	1.2	0.2	1.1	1.6	1.5	61.3	523.5
	2022	121	6.087	346	13	173	0.0	1.2	3.2	1.5	1.2	3.9	-96.0	-64.9
6.0	2023	412	6.586	354	5	198	3.0	0.2	3.2	2.1	1.7	1.4	1808.3	-95.1
	2022	99	6.531	346	12	170	11.1	3.3	3.2	5.9	3.6	4.9	249.6	3.5
6.5	2023	339	7.092	355	4	223	0.7	0.7	8.1	2.9	2.5	2.3	-5.4	-91.4
7.0	2023	142	7.522	354	5	231	1.3	0.0	10.8	3.8	3.3	2.7	5622.2	-99.8

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

GNMA II, Fixed 30, Largest Cohorts

Coupon	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
2.0	2022	33,323	2.498	336	20	321	4.4	4.7	5.8	5.0	5.6	4.8	-5.4	-20.1
	2021	254,805	2.405	325	28	279	4.9	5.5	6.8	5.7	6.5	5.8	-11.5	-19.1
	2020	81,713	2.430	316	35	275	4.7	5.5	7.4	5.9	6.8	6.2	-14.0	-26.4
2.5	2022	66,926	3.001	337	21	253	7.4	5.6	6.9	6.6	6.8	5.8	32.9	-18.7
	2021	233,816	2.923	328	27	235	5.9	6.2	7.4	6.5	7.1	6.3	-3.5	-17.8
	2020	149,977	2.922	315	38	233	5.6	6.4	8.0	6.7	7.7	7.1	-14.2	-20.3
3.0	2022	58,360	3.455	337	20	253	5.5	5.5	7.3	6.1	6.5	5.6	0.5	-25.6
	2021	84,099	3.396	328	27	208	5.7	6.7	8.3	6.9	7.4	6.5	-14.9	-20.0
	2020	68,826	3.470	314	41	195	6.3	7.3	9.3	7.6	8.7	8.1	-13.6	-22.7
	2019	27,946	3.514	305	50	210	6.4	7.2	9.2	7.6	9.0	8.4	-11.0	-23.4
	2017	13,205	3.447	273	78	164	6.2	7.3	7.9	7.1	8.1	7.7	-15.4	-7.2
	2016	37,716	3.408	265	86	159	5.9	7.2	8.6	7.2	7.9	7.5	-18.8	-17.1
	2015	11,572	3.463	250	101	149	6.0	6.8	7.9	6.9	7.7	7.3	-12.0	-15.1
3.5	2022	49,125	3.945	339	19	266	5.0	5.1	6.9	5.7	6.0	4.9	-1.1	-26.7
	2021	18,934	3.888	326	31	200	6.1	6.5	8.5	7.0	7.7	6.5	-6.4	-24.4
	2020	20,543	3.927	311	44	160	7.5	8.4	10.5	8.9	9.4	8.9	-11.4	-20.8
	2019	24,088	4.005	304	51	175	7.0	8.3	10.4	8.6	9.8	9.1	-15.6	-21.5
	2018	12,723	3.940	284	69	156	6.6	7.6	10.0	8.1	8.9	8.7	-12.5	-25.3
	2017	34,518	3.893	276	76	153	6.5	7.7	9.6	7.9	8.6	8.2	-15.9	-20.7
	2016	26,737	3.881	262	89	130	6.2	7.5	8.7	7.5	8.1	7.9	-17.0	-14.6
	2015	25,024	3.877	251	100	130	6.4	7.2	9.0	7.6	7.9	7.7	-11.1	-20.7
	2014	10,158	3.903	238	111	122	5.8	7.0	8.5	7.1	7.7	7.5	-16.8	-18.8
4.0	2022	64,101	4.517	342	16	299	4.5	5.1	6.4	5.3	5.5	4.2	-13.1	-20.6
	2019	15,972	4.506	302	54	153	7.6	8.4	10.7	8.9	9.8	9.5	-9.7	-22.0
	2018	17,959	4.462	289	65	151	7.3	8.6	10.2	8.7	9.4	9.1	-16.0	-16.6
	2017	16,175	4.387	276	76	129	7.1	8.3	10.0	8.5	8.9	8.5	-14.4	-17.9
	2014	10,171	4.353	235	113	102	6.8	7.1	8.4	7.4	7.7	7.5	-5.3	-15.9
4.5	2023	23,665	5.048	352	7	335	1.8	1.9	2.1	1.9	1.8	1.7	-4.9	-12.4
	2022	67,702	5.024	344	14	294	4.7	5.4	6.3	5.5	5.6	4.2	-13.2	-15.0
	2018	12,656	4.938	291	64	138	7.7	8.4	10.9	9.0	9.8	9.5	-8.6	-24.0
5.0	2023	61,054	5.587	353	5	333	2.1	2.2	2.4	2.2	2.1	2.0	-8.8	-7.3
	2022	52,483	5.530	345	13	269	5.2	6.3	7.0	6.2	6.4	4.8	-19.0	-9.1
5.5	2023	77,121	6.086	354	5	313	2.7	2.6	2.8	2.7	2.6	2.5	1.6	-7.8
	2022	27,818	5.996	346	12	266	6.3	6.1	8.4	7.0	9.2	6.6	4.7	-29.1
6.0	2023	70,203	6.584	354	4	289	3.3	4.7	4.2	4.0	3.6	3.3	-30.3	12.1
	2022	11,613	6.527	347	11	270	6.0	8.2	16.9	10.5	10.7	6.8	-28.2	-53.5
6.5	2023	43,752	7.032	355	3	267	3.7	5.9	5.7	5.0	4.4	4.0	-38.0	4.2
7.0	2023	12,308	7.464	355	3	269	5.6	9.4	6.3	7.0	5.9	5.3	-41.9	52.1

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

Fixed 20, by Coupon

Agency	Coupon	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
FNMA	≤ 1.5	21,457	2.466	207	30	269	2.8	2.8	3.6	3.1	3.3	2.8	1.5	-22.1
	2.0	58,110	2.834	207	30	225	3.4	3.7	4.3	3.8	4.0	3.6	-7.3	-14.1
	2.5	25,347	3.222	199	37	177	4.0	4.6	5.5	4.7	5.0	4.6	-13.4	-16.6
	3.0	23,104	3.630	148	85	120	5.7	5.7	7.0	6.1	6.5	6.2	-0.1	-19.3
	3.5	12,152	4.061	138	94	99	6.1	6.8	8.0	7.0	7.3	7.1	-10.4	-15.5
	4.0	8,054	4.555	146	87	96	6.9	7.1	7.9	7.3	7.8	7.7	-3.0	-10.2
	4.5	2,512	5.097	153	80	86	9.0	7.8	9.9	8.9	9.4	9.1	16.4	-22.2
	5.0	1,570	5.804	207	29	114	10.0	7.9	10.9	9.6	10.1	9.7	28.1	-28.6
	5.5	1,062	6.369	212	24	103	11.5	13.4	12.4	12.4	12.3	12.2	-15.0	8.6
≥ 6.0	702	6.930	207	29	80	13.7	15.6	14.1	14.4	14.3	14.4	-13.1	11.1	
FHLMC	≤ 1.5	17,716	2.479	206	30	265	2.9	2.7	2.9	2.8	3.1	2.7	6.8	-6.5
	2.0	50,757	2.855	207	30	227	3.2	3.5	4.7	3.8	4.1	3.6	-7.7	-26.9
	2.5	18,884	3.278	202	34	194	4.0	4.6	5.5	4.7	5.1	4.5	-12.0	-17.9
	3.0	16,234	3.668	155	78	125	5.8	5.4	7.4	6.2	6.4	6.1	7.6	-27.1
	3.5	7,832	4.098	143	89	101	6.1	7.0	7.5	6.9	7.4	6.9	-13.2	-6.1
	4.0	4,591	4.613	147	86	94	7.0	6.9	9.4	7.8	8.0	7.6	0.9	-27.1
	4.5	1,632	5.132	157	77	91	8.9	7.8	8.7	8.5	8.6	8.5	15.0	-10.8
	5.0	1,098	5.806	203	33	102	8.5	8.2	8.9	8.5	9.1	9.7	2.7	-7.3
	5.5	790	6.393	212	25	94	8.6	10.2	13.2	10.6	12.4	12.0	-16.3	-24.5
≥ 6.0	558	6.975	207	30	84	8.3	11.0	14.9	11.0	14.1	14.0	-25.3	-27.7	

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

Fixed 20, by Issue Year

Agency	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
FNMA	2023	2,777	6.069	230	4	226	9.1	9.6	10.3	9.6	9.7	9.7	-5.2	-6.4
	2022	15,403	3.477	219	19	220	4.5	4.7	5.2	4.8	5.0	4.4	-4.9	-9.1
	2021	60,207	2.768	209	28	222	3.4	3.6	4.3	3.8	4.0	3.5	-4.1	-17.9
	2020	35,711	3.023	197	38	208	3.5	3.9	4.6	4.0	4.4	4.0	-11.5	-14.6
	2019	3,642	3.962	181	53	157	5.6	5.9	6.9	6.2	6.8	6.5	-6.1	-15.0
	2018	3,099	4.353	166	65	124	6.7	7.0	7.9	7.2	7.6	7.6	-4.5	-11.9
	2017	5,421	3.925	156	76	125	5.5	5.9	7.8	6.4	6.8	6.6	-7.5	-24.4
	2016	6,773	3.601	145	86	130	5.5	5.9	7.2	6.2	6.6	6.2	-6.2	-18.6
	2015	3,489	3.955	131	100	105	6.1	5.5	6.9	6.2	6.5	6.6	11.4	-21.0
	2014	2,051	4.363	119	112	88	5.8	6.2	8.3	6.8	7.5	7.2	-6.7	-26.0
	2013	5,779	3.731	106	125	82	7.0	6.7	8.2	7.3	7.5	7.3	4.9	-18.8
	2012	5,744	3.758	96	135	82	6.9	7.4	8.0	7.4	7.8	7.6	-6.9	-7.9
	2011	2,107	4.337	85	147	70	7.6	7.3	9.9	8.3	8.7	8.5	3.9	-26.9
	2010	1,162	4.574	74	157	60	8.8	8.9	10.3	9.3	10.0	9.4	-1.9	-13.3
	2009	429	4.865	62	171	46	10.1	10.7	13.1	11.3	12.0	12.0	-5.0	-19.9
	2008	87	5.977	49	185	33	14.5	14.0	11.1	13.2	13.2	12.5	4.2	27.8
2007	75	6.381	40	196	26	12.2	15.1	14.1	13.9	13.2	12.5	-20.5	7.8	
2006	44	6.388	29	208	19	19.1	15.7	13.1	15.9	14.7	14.6	23.9	21.8	
2005	50	5.742	19	219	13	21.7	18.6	21.2	20.5	19.7	17.8	18.3	-13.4	
≤ 2004	20	5.733	9	230	5	36.9	34.7	31.5	34.1	36.4	32.6	7.9	12.5	
FHLMC	2023	1,844	6.260	232	4	222	7.6	8.5	10.6	8.8	10.3	10.1	-11.2	-20.8
	2022	13,856	3.463	219	19	226	4.0	4.6	5.4	4.7	4.8	4.1	-11.5	-16.5
	2021	50,400	2.791	209	28	229	3.3	3.4	4.4	3.7	4.0	3.5	-4.7	-22.9
	2020	29,307	3.042	198	38	212	3.5	3.7	4.9	4.0	4.4	4.0	-5.2	-25.0
	2019	3,373	3.921	184	50	164	6.2	6.5	7.2	6.6	7.1	6.4	-5.4	-9.8
	2018	1,597	4.430	167	65	126	7.3	6.5	8.9	7.6	7.9	7.6	13.4	-28.0
	2017	2,926	3.896	155	77	128	6.1	6.1	7.1	6.4	6.8	6.4	-0.4	-14.9
	2016	3,661	3.684	145	87	123	5.6	5.0	6.8	5.8	6.3	6.1	13.0	-27.5
	2015	2,915	3.896	129	102	105	6.4	7.2	8.0	7.2	7.3	7.0	-12.3	-9.2
	2014	1,173	4.321	119	112	88	6.5	6.8	8.3	7.2	7.9	7.6	-5.1	-18.3
	2013	3,374	3.735	105	125	81	6.3	5.7	8.4	6.8	7.2	7.1	9.9	-32.7
	2012	3,251	3.819	95	136	77	7.1	7.1	8.4	7.5	7.9	7.6	-0.0	-15.8
	2011	1,190	4.394	84	147	70	7.8	6.9	8.4	7.7	8.0	8.2	13.7	-18.1
	2010	846	4.626	74	158	58	8.3	9.1	10.9	9.5	9.7	9.5	-8.9	-17.3
	2009	160	4.873	62	171	48	10.9	12.8	10.3	11.3	11.3	10.7	-15.1	25.2
	2008	52	5.968	49	187	32	9.3	10.8	16.3	12.3	12.2	12.5	-14.6	-35.7
2007	54	6.327	40	196	25	13.3	13.7	17.7	15.0	13.6	12.9	-3.5	-24.0	
2006	44	6.391	30	208	18	14.6	15.5	14.4	14.8	16.1	14.9	-6.5	8.2	
2005	52	5.754	19	219	12	23.9	19.3	19.6	20.8	20.1	17.6	27.5	-1.7	
≤ 2004	17	5.669	9	231	4	37.5	41.4	40.1	39.8	40.3	33.9	-11.8	4.1	

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

FNMA, Fixed 20, Largest Cohorts

Coupon	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
1.5	2022	452	2.430	217	21	318	1.9	2.6	4.6	3.1	3.2	2.8	-26.7	-44.2
	2021	15,452	2.445	209	28	278	2.9	3.0	3.4	3.1	3.2	2.7	-3.8	-12.5
	2020	5,553	2.530	201	35	245	2.9	2.3	4.0	3.1	3.3	3.1	23.1	-42.7
2.0	2022	4,970	2.823	217	21	242	3.5	4.1	4.1	3.9	3.9	3.5	-15.3	-0.7
	2021	35,248	2.801	210	27	226	3.4	3.7	4.4	3.8	4.0	3.6	-7.5	-17.2
	2020	17,867	2.902	198	37	220	3.4	3.6	4.0	3.7	4.0	3.7	-4.2	-11.3
2.5	2022	4,117	3.149	218	20	213	3.5	4.3	4.8	4.2	4.5	4.0	-18.9	-9.3
	2021	8,795	3.138	209	28	165	4.2	4.0	5.5	4.6	4.8	4.4	4.5	-26.4
	2020	10,083	3.320	195	40	191	3.9	5.0	5.5	4.8	5.1	4.7	-22.7	-10.1
	2019	532	3.353	185	49	217	4.5	5.0	5.5	5.0	5.7	5.0	-11.0	-8.6
	2016	984	3.189	147	84	158	4.6	5.2	6.5	5.4	5.6	5.5	-12.4	-19.4
3.0	2022	2,317	3.585	220	18	205	4.3	3.6	5.6	4.5	4.8	4.1	19.4	-35.3
	2021	680	3.543	210	27	122	6.6	5.7	6.7	6.3	6.4	5.2	15.6	-15.7
	2020	1,842	3.788	192	42	154	3.5	5.8	5.9	5.1	6.1	5.9	-40.3	-1.8
	2019	1,916	3.747	180	53	172	5.9	5.3	7.0	6.1	6.3	6.1	10.9	-24.9
	2017	1,923	3.581	154	77	146	4.8	5.3	7.6	5.9	6.3	5.9	-8.6	-31.5
	2016	4,963	3.583	145	86	132	5.6	5.8	7.3	6.3	6.6	6.1	-2.7	-21.5
	2015	2,035	3.758	131	100	121	5.0	5.2	6.3	5.5	6.2	6.3	-3.9	-17.6
	2013	3,772	3.576	105	126	84	7.1	6.5	7.8	7.1	7.4	7.2	9.6	-17.4
2012	3,124	3.581	98	133	88	6.8	6.8	7.4	7.0	7.5	7.3	-0.2	-8.0	
3.5	2022	1,128	4.068	221	17	200	4.3	6.1	4.7	5.1	5.5	5.0	-30.3	30.9
	2019	636	4.316	181	52	139	4.9	7.9	7.1	6.6	8.2	7.9	-39.7	12.8
	2018	909	3.934	163	68	140	5.7	6.3	6.7	6.3	6.7	6.4	-9.3	-6.8
	2017	2,158	3.971	156	76	122	5.3	6.1	8.1	6.5	6.9	6.8	-14.2	-25.7
	2016	519	4.053	144	89	102	5.9	7.9	5.4	6.4	7.0	6.9	-26.4	47.3
	2015	1,007	4.146	131	100	91	7.0	5.5	7.6	6.7	6.6	6.8	29.3	-29.1
	2014	953	4.251	119	112	93	5.4	6.1	8.6	6.8	7.5	7.1	-11.4	-30.1
	2013	1,184	4.106	108	123	76	7.4	8.2	9.1	8.2	8.1	7.7	-9.3	-10.3
2012	2,163	3.988	93	137	77	7.1	7.7	9.0	7.9	8.2	8.0	-8.1	-14.4	
2011	940	4.000	87	145	75	7.0	6.7	9.9	7.9	8.2	8.1	4.2	-33.1	
4.0	2022	1,133	4.774	222	15	219	6.1	6.2	5.9	6.0	6.3	6.1	-1.8	4.1
	2018	1,632	4.497	168	64	125	6.3	7.4	8.0	7.2	7.6	8.0	-15.2	-7.9
	2017	1,195	4.438	158	75	106	7.2	6.6	7.7	7.2	7.6	7.6	10.7	-15.7
	2015	433	4.454	133	99	82	9.4	7.2	8.5	8.4	8.0	7.5	31.2	-15.7
	2014	790	4.648	119	112	79	5.4	6.5	7.6	6.5	7.5	7.4	-16.7	-14.7
	2011	783	4.481	84	148	68	8.3	7.4	9.4	8.3	9.0	8.6	13.0	-22.2
	2010	591	4.447	75	156	63	8.1	7.6	9.4	8.4	9.4	9.0	7.1	-20.3
4.5	2022	676	5.203	223	13	210	10.4	7.7	9.8	9.3	9.1	7.8	38.0	-22.2
5.0	2023	938	5.916	230	6	246	8.5	6.1	9.6	8.1	8.7	8.4	40.9	-37.1
	2022	418	5.703	224	12	187	11.0	8.8	10.2	10.0	9.7	8.1	26.3	-14.4
5.5	2023	813	6.419	231	5	222	10.4	13.3	13.4	12.3	11.8	11.9	-22.5	-0.5
6.0	2023	456	6.881	234	2	204	11.7	17.2	11.3	13.3	12.6	12.5	-34.1	57.0

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

FHLMC, Fixed 20, Largest Cohorts

Coupon	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
1.5	2022	242	2.393	217	21	302	4.1	0.4	4.6	3.0	2.6	1.9	1080.1	-92.5
	2021	14,044	2.466	207	29	268	2.9	2.8	2.9	2.8	3.1	2.8	2.3	-3.6
	2020	3,430	2.536	201	35	251	2.7	2.3	2.6	2.5	3.0	2.7	17.9	-8.8
2.0	2022	4,270	2.795	218	20	251	3.5	4.2	4.1	3.9	4.0	3.3	-16.9	2.7
	2021	30,215	2.836	209	27	226	3.3	3.4	4.9	3.8	4.1	3.6	-3.0	-30.9
	2020	16,272	2.905	199	37	223	3.0	3.5	4.6	3.7	4.1	3.7	-13.3	-25.8
2.5	2022	3,873	3.135	218	20	221	3.2	4.1	4.7	4.0	4.5	3.7	-22.0	-12.7
	2021	5,831	3.280	210	27	183	4.0	5.1	5.6	4.9	5.2	4.6	-21.4	-9.7
	2020	7,636	3.342	196	39	198	4.4	4.2	5.7	4.8	5.0	4.6	3.6	-26.5
	2019	674	3.391	186	48	223	4.6	6.7	6.4	5.9	6.9	5.5	-31.8	5.6
	2016	569	3.294	147	85	154	4.7	3.6	7.4	5.3	6.0	5.6	30.4	-52.6
3.0	2022	2,308	3.566	220	18	213	5.0	3.7	6.7	5.1	4.7	4.2	35.5	-45.5
	2021	247	3.815	211	27	153	6.3	4.9	8.3	6.5	6.3	6.4	30.8	-41.8
	2020	1,633	3.795	192	42	158	5.2	5.3	7.0	5.9	6.4	6.0	-1.6	-25.1
	2019	1,760	3.781	185	49	173	6.3	6.2	7.1	6.5	6.7	6.1	2.3	-12.9
	2017	1,590	3.691	155	77	139	6.1	6.2	8.2	6.8	7.1	6.4	-1.5	-25.3
	2016	2,630	3.668	145	87	123	5.6	5.1	6.3	5.7	6.1	6.0	9.7	-20.1
	2015	1,856	3.709	129	102	116	6.1	6.3	8.0	6.8	6.8	6.7	-3.5	-21.8
	2013	2,316	3.570	104	126	84	6.1	5.2	8.2	6.5	7.0	6.9	16.2	-37.1
3.5	2022	1,154	4.054	221	17	204	2.9	5.6	5.3	4.6	5.2	4.6	-49.0	5.2
	2019	571	4.334	181	53	143	5.2	7.7	7.7	6.9	8.1	6.9	-33.2	-0.7
	2018	520	4.128	166	67	133	8.6	7.3	8.9	8.3	7.8	7.2	19.1	-19.0
	2017	828	4.081	155	76	119	6.5	6.0	4.7	5.8	6.5	6.4	8.6	28.2
	2016	338	4.161	143	90	100	6.0	7.0	9.3	7.4	7.8	6.8	-14.9	-26.2
	2015	838	4.154	130	102	93	6.7	9.1	7.6	7.8	8.3	7.5	-27.5	20.0
	2014	601	4.241	120	112	93	6.3	6.3	7.3	6.7	7.7	7.1	-0.3	-13.8
	2013	644	4.058	108	124	76	6.1	7.4	8.7	7.4	7.3	7.1	-18.3	-16.2
	2012	1,477	3.963	93	138	74	7.5	7.5	8.5	7.9	8.4	7.9	-0.8	-11.7
4.0	2022	455	4.015	86	145	76	6.4	6.9	8.1	7.2	7.7	8.2	-8.1	-14.8
	2022	959	4.763	222	15	220	4.7	7.3	9.7	7.3	7.0	5.5	-36.6	-25.8
	2018	743	4.651	169	64	122	6.7	7.2	7.6	7.2	7.9	7.9	-7.7	-5.0
	2017	383	4.553	157	76	103	6.4	6.9	9.1	7.5	7.1	7.0	-7.6	-25.3
	2015	218	4.498	129	103	80	7.6	6.6	8.4	7.5	7.5	7.2	16.5	-22.1
	2014	377	4.635	119	114	80	7.9	6.6	10.6	8.4	8.8	8.7	21.1	-38.8
	2011	476	4.467	83	148	69	7.5	6.1	9.4	7.7	7.7	7.8	23.5	-36.2
	2010	514	4.476	75	157	58	7.5	9.4	10.6	9.2	9.4	9.2	-21.4	-11.5
4.5	2022	568	5.272	223	13	213	8.4	7.5	7.4	7.8	7.8	7.1	12.8	0.9
5.0	2023	552	5.939	231	5	242	8.0	7.2	9.4	8.2	8.8	9.0	12.0	-24.5
	2022	368	5.744	223	12	195	6.8	7.1	5.1	6.4	6.5	7.2	-4.4	41.9
5.5	2023	626	6.444	233	4	219	7.7	10.7	13.3	10.4	12.1	11.3	-28.8	-20.3
6.0	2023	331	6.908	234	3	207	7.0	7.9	7.5	7.5	10.9	11.0	-11.6	5.6

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

Fixed 15, by Coupon

Agency	Coupon	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
FNMA	≤ 1.5	91,560	2.142	148	29	241	3.5	3.5	4.3	3.8	4.1	3.6	-1.2	-19.1
	2.0	155,864	2.573	141	33	174	4.6	5.0	5.8	5.1	5.4	5.0	-7.4	-14.4
	2.5	83,951	3.007	110	63	106	6.7	6.8	8.0	7.2	7.6	7.2	-1.1	-15.2
	3.0	43,808	3.515	95	78	78	8.5	8.6	9.7	8.9	9.4	9.1	-1.5	-11.8
	3.5	18,939	4.051	103	69	66	9.3	9.7	10.4	9.8	10.2	10.1	-4.7	-7.4
	4.0	7,184	4.630	125	48	64	10.0	10.2	12.4	10.9	11.4	11.3	-2.1	-18.8
	4.5	3,783	5.149	156	19	104	10.1	9.8	11.4	10.4	11.8	11.7	3.4	-14.4
	5.0	3,085	5.690	168	7	181	10.4	10.7	14.5	11.8	13.2	13.1	-3.8	-27.0
	5.5	2,111	6.189	169	5	180	14.1	16.3	15.8	15.4	15.6	15.3	-14.7	3.9
≥ 6.0	1,092	6.679	172	3	190	16.6	16.9	19.4	17.4	18.2	18.2	-2.1	-13.8	
FHLMC	≤ 1.5	93,728	2.236	146	29	234	3.6	3.8	4.7	4.1	4.3	3.9	-4.6	-20.3
	2.0	119,817	2.639	142	32	170	4.7	5.0	5.9	5.2	5.5	5.0	-6.5	-15.5
	2.5	51,599	3.084	105	69	100	7.0	7.3	8.4	7.6	8.0	7.7	-3.8	-13.6
	3.0	30,851	3.580	98	76	81	8.1	8.5	9.6	8.8	9.2	8.9	-5.5	-11.8
	3.5	12,057	4.144	113	61	73	9.5	9.6	10.7	9.9	10.2	9.9	-1.2	-10.0
	4.0	5,897	4.722	136	38	80	9.2	9.4	10.0	9.6	10.2	10.4	-1.8	-6.6
	4.5	3,515	5.252	160	15	130	9.2	9.5	13.5	10.8	11.7	12.0	-3.3	-31.4
	5.0	3,174	5.792	169	6	204	12.3	13.0	14.8	13.3	14.1	13.8	-6.1	-12.8
	5.5	2,390	6.277	171	4	202	17.1	15.6	19.5	17.3	17.5	17.2	10.5	-21.3
≥ 6.0	1,092	6.747	173	2	212	20.2	22.5	20.3	21.0	22.2	21.2	-11.4	12.4	
GNMA I	2.0	7	2.500	47	127	48	5.5	8.7	24.9	13.7	12.0	11.5	-37.8	-67.8
	2.5	244	3.000	46	129	40	11.0	13.6	12.1	12.3	12.2	12.3	-20.1	13.0
	3.0	370	3.500	42	135	33	14.2	14.2	15.0	14.5	14.6	13.6	0.1	-5.7
	3.5	181	4.000	42	142	25	14.2	14.4	15.9	14.9	15.7	14.8	-1.6	-9.6
	4.0	168	4.500	32	151	16	19.9	18.8	20.9	19.9	19.7	18.3	6.5	-11.0
	4.5	31	5.000	25	160	10	25.9	19.6	20.8	22.0	21.1	20.4	36.6	-6.3
	5.0	5	5.500	22	177	7	46.2	24.4	28.5	32.9	31.6	27.7	118.7	-16.7
	5.5	2	6.000	29	201	7	31.7	21.9	22.9	25.3	29.1	25.9	53.1	-4.7
≥ 6.0	2	6.727	26	213	7	40.1	18.4	29.2	29.4	27.7	24.4	148.1	-40.6	
GNMA II	≤ 1.5	857	1.925	148	26	196	4.6	7.3	7.2	6.4	6.9	6.3	-37.5	2.0
	2.0	4,653	2.375	143	30	147	8.1	7.7	10.3	8.8	8.9	8.1	5.4	-25.8
	2.5	4,933	2.902	109	64	89	8.4	9.0	10.4	9.3	9.8	9.4	-7.2	-13.5
	3.0	3,922	3.419	90	84	61	10.2	10.6	11.6	10.8	11.2	10.8	-3.9	-8.9
	3.5	2,224	3.932	102	73	62	10.9	9.3	12.8	11.0	11.2	10.8	17.5	-28.0
	4.0	702	4.469	122	57	62	10.0	10.7	10.0	10.2	10.3	9.8	-7.3	7.7
	4.5	360	4.980	160	20	104	11.4	6.9	10.3	9.6	8.9	8.6	68.0	-33.7
	5.0	212	5.526	170	11	149	7.6	11.7	12.9	10.7	10.0	8.8	-35.7	-10.5
	5.5	140	5.971	173	15	146	3.2	11.6	8.6	7.4	8.1	8.3	-73.3	37.7
≥ 6.0	81	6.532	174	11	138	1.4	2.9	14.9	4.6	12.5	12.4	-51.5	-81.6	

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

Fixed 15, by Issue Year

Agency	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
FNMA	2023	9,950	5.164	159	4	216	10.3	11.9	13.7	11.8	13.1	13.1	-14.4	-14.1
	2022	44,453	3.188	158	18	200	5.1	5.4	6.4	5.7	6.0	5.4	-5.5	-16.3
	2021	159,946	2.388	148	28	194	4.2	4.3	5.1	4.5	4.8	4.4	-3.2	-16.8
	2020	99,482	2.703	136	38	174	4.9	5.3	6.0	5.4	5.9	5.4	-6.5	-13.1
	2019	13,708	3.538	122	50	128	7.8	8.0	8.7	8.2	8.6	8.3	-3.1	-8.7
	2018	6,857	3.959	106	65	95	9.0	7.9	10.0	9.0	9.6	9.5	13.8	-21.3
	2017	13,841	3.402	97	76	97	7.5	8.2	9.1	8.3	8.7	8.4	-8.1	-10.3
	2016	18,821	3.059	86	87	95	7.2	7.2	8.6	7.7	8.2	7.8	-0.9	-16.1
	2015	10,508	3.320	73	100	76	8.1	8.4	10.0	8.8	9.3	8.9	-4.1	-16.9
	2014	6,049	3.618	62	112	57	9.3	9.2	10.7	9.7	10.1	10.1	1.4	-15.5
	2013	13,259	3.085	50	125	53	9.4	9.3	10.3	9.7	10.1	9.9	0.9	-10.2
	2012	10,230	3.162	41	134	45	10.8	10.7	11.7	11.1	11.5	11.1	0.9	-8.8
	2011	2,965	3.787	30	146	30	14.1	14.9	16.0	15.0	15.3	14.6	-5.7	-7.1
	2010	1,130	4.107	21	157	20	18.7	18.3	21.1	19.4	19.6	18.3	2.8	-14.8
2009	178	4.631	10	169	9	28.0	28.5	28.9	28.5	26.9	24.4	-2.4	-1.3	
2008	0	5.715	2	178	1	96.2	89.8	77.6	84.3	69.0	50.6	37.9	47.6	
FHLMC	2023	8,334	5.825	171	4	231	13.2	13.6	16.7	14.4	15.0	14.9	-3.1	-19.4
	2022	37,270	3.272	159	18	201	4.9	5.2	6.1	5.4	5.8	5.4	-6.7	-14.7
	2021	127,279	2.418	148	28	195	4.2	4.4	5.3	4.6	4.8	4.4	-4.9	-16.7
	2020	84,100	2.697	136	38	177	5.0	5.2	6.2	5.5	5.8	5.4	-4.9	-16.4
	2019	10,021	3.586	122	50	127	7.5	7.8	9.1	8.1	8.9	8.4	-3.9	-15.6
	2018	5,250	4.000	107	65	98	9.1	9.0	9.9	9.3	9.8	9.5	2.0	-10.1
	2017	10,242	3.436	96	76	99	7.4	8.2	9.1	8.3	8.6	8.3	-10.3	-9.4
	2016	12,607	3.114	87	86	94	7.2	7.4	8.9	7.8	8.2	7.8	-2.6	-17.6
	2015	8,587	3.314	72	101	74	7.7	8.6	9.3	8.5	9.1	8.9	-10.5	-7.7
	2014	3,906	3.581	62	112	58	10.0	9.9	11.5	10.5	10.8	10.3	0.4	-14.7
	2013	8,578	3.059	50	125	52	9.5	9.6	10.5	9.9	10.2	10.0	-0.6	-9.2
	2012	5,561	3.191	40	135	41	11.3	11.2	12.5	11.7	11.9	11.6	1.5	-11.5
	2011	1,606	3.826	30	147	28	14.8	15.1	16.3	15.4	15.6	15.1	-2.1	-8.0
	2010	671	4.163	21	157	20	19.8	18.5	19.1	19.1	18.9	18.6	7.8	-3.5
2009	106	4.619	10	170	8	33.9	26.8	30.7	30.4	28.2	24.7	32.1	-14.4	
2008	0	5.819	2	178	1	92.0	91.1	90.7	90.9	69.4	52.5	3.8	1.6	

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

Fixed 15, by Issue Year

Agency	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
GNMA I	2017	1	3.500	104	76	92	0.0	0.0	0.0	0.0	0.1	0.1	5.6	20.0
	2016	2	3.134	96	85	70	1.0	1.0	0.9	1.0	0.8	0.6	2.2	2.8
	2015	8	3.429	85	102	57	1.0	4.1	1.0	2.0	5.8	3.9	-76.4	298.2
	2014	41	3.831	74	112	43	15.2	11.4	8.2	11.6	10.7	9.4	36.7	40.4
	2013	229	3.333	58	125	39	9.6	11.5	11.5	10.9	10.6	10.8	-17.2	-0.5
	2012	381	3.390	40	136	33	13.0	14.4	14.0	13.8	14.2	13.6	-10.3	2.8
	2011	189	3.996	29	148	24	18.6	16.0	19.6	18.1	18.0	16.4	17.7	-20.0
	2010	118	4.465	21	159	15	19.3	20.5	21.7	20.6	20.7	19.1	-6.4	-6.3
	2009	36	4.732	12	169	8	37.1	27.3	28.6	30.7	29.3	25.6	44.4	-5.1
	2008	1	5.917	51	184	7	18.9	30.9	61.1	42.2	41.1	36.1	-43.0	-59.9
	2007	0	6.316	41	196	22	6.1	3.8	3.7	4.6	15.7	8.2	61.3	2.8
	2006	0	6.692	28	210	14	3.3	5.0	0.6	2.9	2.7	5.6	-34.3	705.0
	2005	2	6.112	18	220	8	20.4	12.7	18.7	17.3	13.6	13.8	67.7	-34.3
≤ 2004	1	6.345	13	233	4	45.4	26.3	29.5	33.4	31.3	30.5	95.4	-12.3	
GNMA II	2023	654	5.435	171	10	170	4.5	5.5	6.4	5.4	5.8	5.7	-17.4	-14.1
	2022	2,297	3.136	158	18	159	8.0	9.4	10.3	9.3	8.9	7.8	-15.6	-9.5
	2021	5,163	2.438	145	27	146	7.4	7.6	9.8	8.3	8.7	8.0	-3.4	-22.6
	2020	1,647	2.932	132	39	132	7.6	7.6	9.9	8.4	9.2	8.7	0.1	-23.8
	2019	758	3.868	122	51	93	11.3	10.1	11.3	10.9	10.8	10.4	12.0	-10.6
	2018	911	3.880	109	64	82	9.9	8.9	12.7	10.5	10.1	10.3	12.8	-31.6
	2017	1,563	3.402	97	76	76	8.8	10.1	11.1	10.0	10.2	10.1	-13.4	-9.4
	2016	1,620	3.137	86	87	70	9.8	8.3	9.9	9.4	9.8	9.7	19.0	-17.0
	2015	1,037	3.304	74	99	58	10.4	10.8	11.3	10.8	11.5	11.1	-4.7	-4.1
	2014	591	3.579	65	111	47	12.2	10.4	12.4	11.7	11.7	11.5	17.6	-16.8
	2013	914	3.107	50	124	43	11.2	11.7	12.7	11.9	12.5	11.7	-4.6	-8.5
	2012	675	3.239	41	135	38	13.1	12.4	15.3	13.6	13.6	12.9	5.4	-20.0
	2011	197	3.946	33	147	27	16.1	15.9	16.7	16.2	16.5	15.7	1.4	-5.7
	2010	47	4.376	31	158	19	20.8	23.1	19.4	21.1	18.3	17.2	-11.2	21.3
	2009	9	4.710	10	169	8	45.6	29.3	29.2	34.4	29.4	25.9	73.5	0.7
	2008	0	5.794	34	182	1	96.3	94.5	88.2	91.8	67.0	43.6	12.2	31.3
2007	0	6.572	42	194	23	1.8	0.1	4.0	2.0	1.3	1.6	2157.2	-98.1	
2005	0	5.981	18	219	10	5.0	15.1	11.5	10.8	10.2	15.9	-68.3	33.4	
≤ 2004	0	6.348	9	230	4	29.7	41.3	12.8	28.1	46.9	33.5	-33.3	284.3	

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

FNMA, Fixed 15, Largest Cohorts

Coupon	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
1.0	2021	2,338	1.885	147	29	284	2.5	2.6	2.8	2.6	3.2	2.7	-3.7	-5.3
1.5	2022	6,718	2.178	157	20	262	3.1	3.2	4.2	3.5	3.6	3.0	-2.7	-23.7
	2021	63,448	2.119	149	27	242	3.4	3.4	4.3	3.7	4.0	3.5	1.1	-21.8
	2020	18,556	2.243	139	36	228	3.7	4.0	4.4	4.1	4.5	4.0	-8.7	-9.3
2.0	2022	14,475	2.607	157	20	203	3.8	4.4	5.2	4.5	4.8	4.3	-15.4	-14.9
	2021	81,013	2.516	147	28	177	4.5	4.8	5.6	5.0	5.2	4.8	-6.1	-14.4
	2020	54,367	2.642	136	38	183	4.7	5.2	6.0	5.3	5.7	5.3	-9.1	-14.5
	2016	1,806	2.604	89	85	120	5.5	6.1	6.3	6.0	6.7	6.3	-11.0	-3.0
	2013	2,019	2.611	50	126	65	8.6	7.7	8.9	8.4	8.6	8.1	11.8	-13.6
2.5	2022	8,579	3.035	158	19	184	4.8	4.8	6.1	5.2	5.6	4.9	-1.8	-20.5
	2021	12,263	2.940	146	29	137	5.8	5.7	6.4	5.9	6.2	5.7	1.7	-12.0
	2020	21,632	3.061	133	40	144	6.0	6.1	6.9	6.4	6.9	6.4	-2.5	-11.9
	2019	5,689	3.133	123	49	163	6.2	7.3	8.3	7.3	7.8	7.3	-16.1	-11.4
	2017	3,313	2.963	95	77	119	7.7	7.1	8.5	7.8	7.8	7.3	8.6	-16.3
	2016	12,534	2.946	87	86	107	7.1	6.8	8.6	7.5	8.0	7.6	4.3	-22.0
	2015	4,543	3.040	73	100	90	7.0	7.3	9.6	8.0	8.5	8.2	-3.8	-25.7
	2013	7,490	2.929	49	126	56	9.1	9.4	10.2	9.6	10.1	9.9	-2.6	-8.8
	2012	6,069	2.990	42	133	52	9.9	9.9	11.1	10.3	10.7	10.4	0.7	-11.5
3.0	2022	5,051	3.625	160	17	180	6.0	5.7	6.5	6.1	6.7	5.9	6.4	-13.6
	2020	3,719	3.574	130	43	112	7.5	7.5	8.9	8.0	8.1	7.9	-0.5	-16.7
	2019	3,858	3.590	122	50	126	9.3	7.8	9.0	8.7	9.2	8.8	19.9	-14.0
	2018	2,168	3.534	104	68	113	8.0	7.4	10.0	8.5	9.3	8.9	8.0	-27.0
	2017	8,050	3.433	97	75	101	7.4	8.3	9.0	8.2	8.9	8.6	-10.7	-8.1
	2016	3,862	3.486	84	89	73	7.9	8.9	9.4	8.7	9.1	8.8	-11.4	-5.1
	2015	5,047	3.487	74	99	72	8.7	9.2	10.2	9.4	9.8	9.3	-5.0	-10.5
	2014	3,754	3.528	62	112	62	9.0	9.0	10.4	9.5	10.0	9.9	-0.3	-13.5
	2013	2,806	3.516	52	122	47	10.5	10.0	11.2	10.6	10.9	10.8	4.8	-10.9
	2012	3,132	3.450	39	137	39	12.4	12.3	12.7	12.5	12.8	12.4	0.8	-3.3
3.5	2022	3,920	4.146	161	15	202	6.3	8.0	7.7	7.4	7.5	6.8	-21.7	3.9
	2019	2,991	4.087	119	52	102	8.8	9.1	9.1	9.0	9.5	9.3	-3.5	0.2
	2018	2,713	4.045	107	65	95	9.4	8.2	10.0	9.2	9.7	9.7	16.4	-19.5
	2017	2,139	3.994	97	76	68	8.0	9.7	10.6	9.4	9.6	9.5	-18.0	-8.8
	2014	1,500	4.042	60	114	45	9.7	10.0	11.9	10.6	11.0	11.2	-4.0	-16.6
4.0	2023	1,112	4.789	165	5	279	7.4	6.1	8.9	7.5	8.7	8.7	23.4	-33.0
	2022	2,606	4.686	161	14	189	7.8	8.8	11.6	9.4	9.4	8.7	-11.6	-25.7
	2018	1,585	4.570	109	62	76	9.8	8.6	9.9	9.4	10.0	10.3	15.0	-14.2
4.5	2023	1,664	5.294	170	6	245	7.0	9.1	10.0	8.7	12.0	12.0	-24.0	-9.8
	2022	1,765	5.046	161	13	175	11.4	8.8	11.0	10.4	10.2	9.8	30.6	-20.7
5.0	2023	2,043	5.754	171	4	217	10.2	10.4	15.7	12.0	13.6	13.6	-1.6	-35.7
5.5	2023	1,824	6.194	170	4	185	14.2	17.7	16.5	16.1	16.3	16.3	-21.2	7.9
6.0	2023	1,040	6.666	172	3	192	16.3	17.3	19.8	17.5	18.0	17.9	-6.2	-14.0

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

FHLMC, Fixed 15, Largest Cohorts

Coupon	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
1.0	2021	3,966	1.897	147	29	275	3.2	4.2	3.6	3.7	3.4	3.0	-25.4	17.4
1.5	2022	6,473	2.236	157	20	262	2.1	2.5	4.4	3.0	3.3	3.0	-17.5	-43.3
	2021	57,361	2.217	148	28	236	3.6	3.8	4.6	4.0	4.2	3.8	-3.5	-18.1
	2020	25,883	2.329	139	36	217	4.1	4.1	5.4	4.5	4.9	4.4	-0.9	-23.9
2.0	2022	11,465	2.637	157	20	203	3.6	4.3	5.0	4.3	4.7	4.1	-15.6	-14.5
	2021	62,001	2.588	148	28	170	4.6	4.8	5.9	5.1	5.3	4.8	-4.5	-17.8
	2020	43,444	2.714	136	38	174	5.0	5.4	6.1	5.5	5.8	5.4	-7.5	-12.6
	2016	881	2.604	89	85	113	5.6	6.4	7.8	6.6	6.9	6.5	-12.3	-18.7
	2013	1,268	2.612	49	126	62	7.6	8.0	8.4	8.0	8.6	8.3	-5.0	-5.0
2.5	2022	5,581	3.067	158	19	175	4.8	4.8	5.8	5.1	5.4	4.9	1.5	-19.1
	2021	3,512	3.123	147	27	127	6.3	6.9	7.3	6.8	7.0	6.4	-8.5	-6.0
	2020	12,145	3.188	132	41	144	6.3	6.2	7.7	6.7	7.1	6.8	0.8	-19.1
	2019	4,493	3.212	124	48	153	6.9	7.6	7.9	7.5	8.4	7.8	-10.7	-3.8
	2017	3,245	3.023	95	78	114	6.4	7.4	8.6	7.5	7.9	7.5	-14.3	-14.4
	2016	8,660	2.992	87	86	105	6.9	7.1	8.5	7.5	8.0	7.6	-2.8	-16.5
	2015	4,198	3.059	72	101	86	7.6	8.1	8.8	8.2	8.6	8.4	-6.2	-8.9
	2013	5,446	2.961	49	126	54	9.4	9.9	10.8	10.0	10.3	10.1	-5.3	-8.8
	2012	3,398	3.029	42	133	47	10.2	10.2	11.5	10.7	10.7	10.6	-0.2	-12.2
3.0	2022	4,517	3.606	160	17	186	4.9	6.0	5.9	5.6	6.1	5.5	-18.1	0.5
	2020	2,079	3.705	130	43	121	7.0	7.9	8.8	7.9	7.7	7.9	-11.7	-11.2
	2019	3,056	3.692	122	50	127	7.7	7.8	9.6	8.4	8.9	8.5	-1.5	-19.9
	2018	1,870	3.621	105	67	111	9.0	7.8	9.4	8.7	9.4	9.3	17.0	-18.4
	2017	5,668	3.549	97	75	99	7.9	8.6	9.4	8.6	8.9	8.6	-7.7	-8.7
	2016	2,777	3.555	84	89	74	8.0	8.0	9.9	8.7	9.0	8.6	1.0	-20.5
	2015	3,885	3.524	73	100	69	7.3	8.9	9.6	8.6	9.3	9.2	-18.2	-7.7
	2014	2,513	3.554	62	112	61	9.2	10.0	11.7	10.3	10.5	10.1	-8.3	-15.1
	2013	1,479	3.541	53	122	46	10.9	9.6	11.2	10.6	10.9	10.7	14.0	-14.8
	2012	1,824	3.475	37	139	36	13.2	12.9	14.1	13.4	13.8	13.2	2.3	-9.3
	2011	749	3.489	32	145	35	13.3	13.2	14.1	13.6	14.1	13.6	1.4	-7.2
3.5	2022	3,620	4.222	161	15	198	7.0	7.7	8.8	7.8	8.0	7.2	-9.2	-13.4
	2019	1,584	4.194	119	52	94	8.8	8.6	11.7	9.7	10.3	10.0	2.6	-27.8
	2018	2,221	4.140	108	64	96	9.4	10.0	9.9	9.7	10.2	9.8	-6.5	1.3
	2017	1,151	4.090	96	76	70	8.4	9.3	9.0	8.9	9.1	9.0	-10.8	3.4
	2014	695	4.053	61	112	43	13.1	10.6	12.6	12.1	11.9	11.2	25.0	-16.2
4.0	2023	791	4.843	170	5	276	5.1	7.3	7.8	6.7	7.2	7.7	-30.1	-7.9
	2022	3,014	4.767	161	14	190	8.3	7.5	7.6	7.8	8.5	8.5	9.8	-0.5
	2018	881	4.646	109	61	77	9.2	10.1	11.0	10.1	10.2	9.9	-9.3	-8.5
4.5	2023	1,802	5.345	169	5	255	8.2	10.0	15.4	11.2	12.7	12.6	-18.9	-37.0
	2022	1,515	5.173	162	13	183	9.3	7.9	10.2	9.2	9.9	10.7	18.8	-23.3
5.0	2023	2,401	5.824	171	4	231	12.4	13.5	17.0	14.1	15.3	15.5	-8.7	-21.9
5.5	2023	2,101	6.285	172	4	209	18.1	16.4	20.8	18.3	18.5	18.5	11.7	-23.2
6.0	2023	1,047	6.738	173	2	215	20.6	22.9	21.0	21.5	22.8	21.8	-11.3	10.6

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

GNMA I, Fixed 15, Largest Cohorts

Coupon	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
2.5	2016	2	3.000	92	84	68	1.0	1.0	1.0	1.0	0.8	0.6	2.2	2.9
	2015	4	3.000	75	101	58	1.7	1.7	1.7	1.7	7.0	5.3	1.8	-0.4
	2013	117	3.000	49	126	41	10.7	12.2	12.8	11.9	10.9	11.5	-12.7	-4.6
	2012	115	3.000	41	134	38	11.8	16.1	12.2	13.4	14.0	13.7	-28.4	34.0
3.0	2017	1	3.500	104	76	92	0.0	0.0	0.0	0.0	0.1	0.1	5.6	20.0
	2015	3	3.500	76	103	55	0.3	10.0	0.5	3.7	2.0	1.2	-97.1	1946.5
	2014	17	3.500	60	113	46	22.3	18.3	12.6	17.7	16.1	12.8	24.4	49.8
	2013	64	3.500	61	125	38	8.6	13.4	12.3	11.5	11.9	11.1	-37.3	10.3
	2012	234	3.500	38	137	32	14.7	14.7	15.5	15.0	15.1	14.1	-0.6	-5.1
3.5	2014	6	4.000	58	115	37	10.0	7.4	10.6	9.4	8.6	11.0	36.7	-31.3
	2013	33	4.000	79	124	35	9.9	7.1	5.5	7.5	8.5	8.4	41.4	28.8
	2012	29	4.000	58	136	29	5.1	5.7	8.5	6.5	7.6	10.0	-11.6	-34.1
	2011	89	4.000	28	149	23	18.0	18.0	19.9	18.7	19.1	17.2	0.3	-10.5
4.0	2011	47	4.500	29	149	21	21.7	17.2	20.9	20.0	18.5	16.3	29.5	-19.4
	2010	76	4.500	20	159	15	18.9	20.7	23.2	21.1	20.8	19.3	-9.6	-12.2

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

GNMA II, Fixed 15, Largest Cohorts

Coupon	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
1.5	2022	204	1.968	154	21	210	4.6	6.6	10.6	7.3	6.3	6.4	-31.6	-39.1
	2021	637	1.909	148	26	203	4.6	7.2	6.1	6.0	7.0	6.2	-37.5	18.6
2.0	2022	688	2.387	156	20	167	7.5	8.6	9.2	8.4	7.6	7.2	-13.0	-6.8
	2021	3,348	2.361	145	27	150	8.3	7.4	10.6	8.8	9.0	8.1	12.6	-31.1
	2020	459	2.420	132	36	163	7.5	8.3	8.9	8.2	9.0	8.2	-10.7	-6.2
2.5	2022	543	2.897	157	19	149	6.7	9.9	10.0	8.9	8.9	8.2	-33.8	-1.3
	2021	1,058	2.879	145	28	123	6.0	8.7	8.9	7.9	8.5	8.5	-32.0	-2.9
	2020	776	2.900	133	39	136	6.8	6.6	9.5	7.6	8.7	8.3	3.2	-32.0
	2017	478	2.923	95	77	92	8.8	9.4	10.1	9.4	9.7	9.6	-6.0	-7.6
	2016	914	2.911	86	86	80	10.9	8.0	10.4	9.8	10.1	9.6	37.3	-23.7
	2015	340	2.936	72	100	74	8.5	9.7	11.0	9.8	11.0	10.8	-13.1	-12.6
	2013	434	2.854	48	126	46	10.2	11.5	12.6	11.5	12.0	11.3	-12.5	-9.2
2012	232	2.935	41	134	42	12.8	13.0	13.9	13.2	12.9	12.7	-1.4	-7.3	
3.0	2022	264	3.448	159	18	144	8.3	9.4	10.9	9.6	10.3	8.9	-12.4	-14.2
	2021	92	3.404	139	33	95	10.9	7.6	10.8	9.8	11.3	9.2	46.1	-30.8
	2020	313	3.444	129	42	110	8.3	10.4	12.3	10.4	11.3	10.4	-20.3	-16.8
	2019	256	3.479	124	49	107	12.4	10.0	11.4	11.3	10.8	10.6	25.4	-12.7
	2018	173	3.451	106	66	90	8.1	6.3	8.0	7.5	8.2	9.2	29.3	-21.5
	2017	647	3.448	97	75	74	8.4	11.4	10.4	10.1	10.0	10.1	-27.3	9.5
	2016	579	3.420	85	88	59	8.6	8.5	9.8	9.0	9.6	9.8	1.5	-14.1
	2015	568	3.411	74	99	53	11.4	11.9	12.2	11.8	12.3	11.4	-4.1	-3.3
	2014	315	3.412	63	110	51	12.6	10.6	12.3	11.8	11.5	11.3	19.8	-14.8
2013	297	3.356	51	124	39	12.0	13.2	12.9	12.7	13.0	12.1	-9.7	2.7	
2012	366	3.345	39	136	37	12.8	11.9	15.2	13.3	13.8	13.1	7.9	-23.0	
3.5	2022	216	3.949	161	15	156	6.5	6.4	11.9	8.3	9.2	7.2	0.7	-47.6
	2019	290	3.975	121	52	91	12.1	11.4	10.7	11.4	10.8	10.4	6.8	6.7
	2018	561	3.983	110	63	81	11.0	8.4	14.5	11.4	11.1	11.1	31.6	-43.8
	2017	398	3.928	99	75	64	9.6	8.2	12.8	10.3	11.1	10.8	17.8	-37.3
	2015	112	3.883	82	98	48	9.5	9.8	8.0	9.1	9.7	10.0	-3.4	24.7
	2014	185	3.852	62	112	40	11.6	10.8	12.6	11.7	12.3	12.1	8.4	-15.2
	2013	98	3.850	59	121	38	13.0	10.7	9.7	11.1	11.5	10.9	23.2	10.8
	2012	62	3.855	50	138	32	16.1	12.6	20.1	16.4	15.3	13.4	29.6	-39.7
2011	86	3.857	31	147	27	16.6	16.6	17.3	16.8	17.6	16.6	-0.1	-4.0	
4.0	2022	211	4.476	163	15	159	9.4	10.6	5.0	8.4	8.7	6.7	-11.9	116.5
	2019	161	4.540	120	54	74	8.3	7.4	12.3	9.4	11.0	10.3	12.4	-41.0
	2018	116	4.475	115	61	72	7.7	14.7	11.4	11.3	9.1	9.2	-49.7	31.3
	2011	61	4.317	33	149	24	18.3	13.3	17.8	16.5	16.3	15.6	42.0	-27.1
	2010	23	4.367	34	158	20	16.4	26.7	16.8	20.1	17.8	16.6	-41.8	68.0
4.5	2023	204	5.033	174	5	198	5.5	3.4	3.8	4.3	3.8	3.7	62.8	-11.9
	2022	121	4.931	164	13	158	18.2	9.5	17.0	15.0	12.9	9.9	100.6	-46.3
5.0	2023	173	5.547	173	7	179	5.4	4.7	9.9	6.5	6.1	6.0	15.7	-54.2
5.5	2023	125	5.984	174	13	162	2.6	11.7	5.3	6.4	7.7	7.5	-79.2	128.3

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

Fixed 10, by Coupon

Agency	Coupon	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
FNMA	≤ 1.5	11,257	2.196	88	27	149	6.0	5.5	6.3	5.9	6.1	5.6	9.1	-12.9
	2.0	6,186	2.611	83	31	116	6.5	7.3	8.3	7.4	7.7	7.5	-10.9	-12.9
	2.5	2,457	3.036	60	55	61	11.6	10.8	11.6	11.3	12.0	12.1	8.1	-7.7
	3.0	1,208	3.556	59	56	48	12.7	14.3	14.8	13.9	14.1	13.6	-12.0	-4.0
	3.5	585	4.081	64	51	53	12.8	14.0	13.5	13.4	13.6	13.5	-9.3	4.1
	4.0	248	4.692	83	31	72	16.4	12.7	12.6	13.9	13.6	13.8	31.4	1.0
	4.5	79	5.209	104	10	122	10.4	18.0	13.4	14.0	17.7	16.3	-44.6	37.8
	5.0	123	5.757	111	4	140	10.8	14.8	15.0	13.2	12.1	14.1	-28.1	-1.5
	5.5	57	6.224	112	4	134	29.7	13.7	10.3	19.8	21.9	22.4	137.3	34.9
≥ 6.0	22	6.760	113	2	129	15.6	71.4	34.4	42.7	37.1	36.0	-85.9	187.0	
FHLMC	≤ 1.5	6,006	2.198	89	27	156	4.6	4.9	6.8	5.5	5.8	5.5	-6.6	-28.9
	2.0	2,216	2.696	86	30	121	6.4	7.0	8.1	7.2	7.4	7.2	-9.2	-14.3
	2.5	663	3.141	67	51	60	12.3	12.2	10.7	11.7	11.5	10.6	1.5	14.4
	3.0	324	3.660	70	48	50	11.6	10.9	12.2	11.6	12.2	11.8	7.1	-11.4
	3.5	173	4.187	75	43	54	11.6	13.5	12.1	12.4	12.8	12.1	-14.4	11.9
	4.0	118	4.804	94	22	79	13.6	13.5	10.6	12.6	12.2	10.5	1.1	29.4
	4.5	76	5.300	106	10	126	11.3	9.7	23.6	15.1	14.9	13.2	16.8	-61.7
	5.0	73	5.811	108	6	124	18.6	13.2	21.6	17.8	18.7	17.3	45.1	-41.7
	5.5	71	6.311	112	4	133	12.1	23.7	26.7	20.7	18.4	18.5	-52.0	-12.9
≥ 6.0	49	6.849	114	3	116	31.6	16.8	13.8	23.1	20.2	19.8	104.9	23.1	

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

Fixed 10, by Issue Year

Agency	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
FNMA	2023	355	4.835	104	3	145	14.5	23.6	13.6	17.0	18.4	18.5	-41.4	83.5
	2022	3,166	2.892	97	19	137	6.1	7.0	7.3	6.8	7.0	6.7	-13.7	-3.2
	2021	12,238	2.287	88	27	137	6.1	5.7	6.9	6.2	6.4	6.0	6.3	-17.5
	2020	3,896	2.658	76	38	119	8.1	8.4	8.2	8.3	8.7	8.3	-3.2	2.2
	2019	502	3.556	63	50	79	11.8	11.2	11.3	11.4	12.0	12.2	6.0	-1.0
	2018	391	3.886	50	65	53	11.7	14.4	14.9	13.7	14.2	13.6	-19.5	-3.9
	2017	643	3.294	40	76	50	14.2	12.6	14.8	13.9	13.6	13.4	14.2	-16.3
	2016	689	2.983	31	86	41	13.2	13.0	14.6	13.6	14.3	14.2	1.6	-12.0
	2015	264	3.195	19	99	23	20.9	19.5	20.1	20.2	19.9	18.6	7.6	-3.2
	2014	75	3.346	10	110	10	31.3	28.9	32.1	30.8	28.9	25.3	9.9	-11.8
2013	2	3.452	2	118	2	94.9	85.4	77.1	82.3	72.4	47.2	48.3	28.4	
FHLMC	2023	225	6.056	111	4	134	19.4	16.2	24.0	19.7	18.3	18.2	21.4	-35.2
	2022	1,647	2.918	98	19	140	5.5	6.9	6.5	6.3	6.7	6.2	-21.3	6.8
	2021	5,738	2.279	89	27	145	4.6	5.3	6.7	5.6	6.0	5.8	-13.7	-20.7
	2020	1,605	2.619	77	39	132	8.1	6.9	10.2	8.4	7.9	7.4	19.3	-33.8
	2019	148	3.534	65	51	86	11.5	9.8	9.7	10.3	9.9	9.8	17.8	1.0
	2018	59	3.973	49	70	53	12.5	14.4	14.4	13.8	14.0	13.1	-13.6	-0.3
	2017	108	3.439	40	80	43	17.2	12.8	13.6	14.5	14.9	12.6	38.2	-6.4
	2016	130	3.076	30	88	36	16.4	14.4	19.0	16.7	15.8	14.1	15.0	-25.8
	2015	86	3.355	20	104	21	20.9	21.5	17.7	20.0	19.4	18.4	-3.1	24.5
	2014	22	3.473	10	110	8	31.8	24.1	28.6	28.1	25.8	24.3	38.2	-17.9
	2013	0	4.002	5	135	2	90.1	88.8	79.3	84.0	72.3	49.2	5.1	35.4
	2011	0	5.267	30	150	17	0.0	13.2	8.4	7.5	15.8	8.7	-99.9	60.9
2010	0	5.500	5	175	6	0.0	0.0	0.0	0.0	0.3	0.2	73.9	27.8	

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

FNMA, Fixed 10, Largest Cohorts

Coupon	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ		
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep	
1.5	2023	68	2.264	85	0		5.2				5.2	5.2	5.2		
	2022	1,130	2.250	96	20	162	3.5	4.1	7.1	4.9	5.1	5.1		-13.4	-43.2
	2021	9,306	2.184	88	27	149	6.1	5.5	6.2	5.9	6.0	5.5		10.8	-11.4
	2020	752	2.262	79	35	140	8.4	7.4	6.2	7.3	7.9	7.3		13.2	20.2
2.0	2023	23	2.531	77	0		6.1			6.1	6.1	6.1			
	2022	1,032	2.700	96	19	130	5.1	7.5	6.6	6.4	6.6	6.2		-33.1	13.9
	2021	2,877	2.606	86	28	111	6.0	6.3	9.0	7.2	7.4	7.2		-4.6	-31.1
	2020	2,131	2.576	77	37	124	7.7	8.1	7.8	7.9	8.2	7.8		-4.9	4.5
	2019	13	2.739	67	48	122	3.4	30.3	9.2	15.1	11.8	9.8		-90.4	271.5
2.5	2022	400	3.197	97	18	123	10.1	7.1	5.4	7.5	8.7	7.9		43.9	33.7
	2021	50	3.099	86	28	63	6.5	10.3	9.7	8.9	7.4	7.9		-37.4	6.4
	2020	853	3.028	73	41	105	8.6	9.1	10.3	9.3	9.7	9.7		-5.4	-12.2
	2019	185	3.059	66	48	103	10.2	7.9	7.1	8.4	9.5	9.8		31.0	11.7
	2018	23	3.059	47	69	72	4.3	14.2	9.1	9.4	8.1	8.6		-70.9	60.0
	2017	239	2.965	39	77	58	12.9	9.7	12.6	11.7	12.7	12.5		34.3	-24.0
	2016	486	2.923	31	86	44	13.9	13.1	14.7	13.9	14.2	14.3		5.9	-11.4
	2015	177	3.040	19	99	25	20.3	19.1	19.4	19.6	19.2	18.0		7.1	-1.8
3.0	2022	44	3.164	10	110	12	29.8	27.0	29.9	28.9	27.2	24.1		12.1	-11.2
	2022	275	3.753	99	17	121	7.0	13.1	10.0	10.1	9.9	8.6		-48.6	33.7
	2020	144	3.588	70	44	76	10.3	11.1	11.8	11.1	11.5	11.1		-7.1	-6.9
	2019	151	3.579	63	50	83	10.7	14.3	12.2	12.4	12.5	12.5		-26.6	18.2
	2018	111	3.475	48	68	58	12.6	12.8	14.0	13.1	14.2	13.6		-1.3	-9.5
	2017	306	3.397	40	75	49	14.8	13.6	17.2	15.2	14.2	13.8		9.4	-22.2
	2016	109	3.483	29	88	30	15.5	15.4	16.0	15.6	16.3	15.8		0.8	-4.3
	2015	73	3.546	19	99	19	23.2	20.8	22.5	22.1	21.7	20.0		12.9	-8.2
3.5	2022	23	3.603	9	110	8	33.9	32.2	35.5	34.0	32.0	27.0		6.5	-11.1
	2022	154	4.256	100	15	132	7.9	10.1	5.5	7.8	7.1	8.4		-22.2	88.3
	2020	15	4.094	71	44	53	3.8	27.8	15.1	16.2	15.3	11.8		-88.0	97.6
	2019	123	4.059	60	53	65	17.2	10.6	15.5	14.5	15.3	15.5		68.6	-33.7
	2018	188	3.998	50	65	52	12.2	15.4	17.4	15.1	15.3	13.8		-22.2	-12.0
4.0	2017	85	3.961	40	76	36	15.8	17.5	11.5	14.9	14.3	14.9		-10.4	56.5
	2023	27	4.832	107	7	169	28.5	35.1	17.6	27.3	24.0	22.6		-22.1	121.7
	2022	122	4.743	101	14	127	18.0	7.2	11.4	12.3	12.3	12.3		165.0	-38.1
	2019	28	4.730	60	55	42	7.8	8.2	14.9	10.4	10.7	12.1		-5.6	-46.6
4.5	2018	69	4.528	53	62	45	11.4	13.9	11.5	12.3	12.8	14.6		-19.3	22.9
	2023	41	5.287	108	6	168	14.0	17.2	9.3	13.6	22.8	21.0		-19.7	91.8
5.0	2022	36	5.127	103	12	104	6.6	19.8	18.0	15.1	12.6	13.4		-68.6	10.7
	2023	108	5.782	112	3	149	10.7	16.2	14.6	13.4	12.4	14.3		-35.7	11.6
5.5	2022	15	5.574	104	11	106	11.8	7.6	16.6	12.1	10.6	13.6		58.8	-56.1
	2023	55	6.219	112	3	136	29.6	14.1	10.6	20.0	22.5	22.1		129.1	36.0
6.0	2023	22	6.760	113	2	129	15.6	71.4	34.4	42.7	37.1	36.0		-85.9	187.0

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

FHLMC, Fixed 10, Largest Cohorts

Coupon	Issue Year	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Oct	Sep	Aug	3M	6M	12M	Sep→Oct	Aug→Sep
1.5	2022	637	2.190	96	20	169	3.1	5.2	5.4	4.6	4.6	4.4	-40.4	-4.3
	2021	4,622	2.174	89	27	155	4.4	4.8	6.5	5.3	5.8	5.5	-8.3	-26.1
	2020	747	2.354	80	35	156	6.7	5.1	10.1	7.3	7.0	6.8	33.7	-51.0
2.0	2022	464	2.677	97	19	135	5.3	6.7	5.2	5.7	6.4	6.1	-21.9	30.2
	2021	1,064	2.687	88	28	116	5.3	7.0	7.5	6.6	7.1	7.0	-25.1	-7.3
	2020	656	2.723	76	39	133	8.4	6.8	10.8	8.7	8.1	7.6	24.6	-38.2
	2019	7	2.887	68	48	128	4.1	2.3	3.0	3.1	3.0	6.0	82.4	-24.8
	2016	16	2.662	30	86	45	16.5	15.6	14.0	15.3	15.1	12.4	5.9	13.0
2.5	2022	169	3.158	98	18	121	7.2	7.7	4.3	6.4	6.8	5.7	-6.7	81.6
	2021	51	3.278	89	27	90	6.1	14.4	5.9	8.9	6.9	6.4	-59.1	153.1
	2020	170	3.156	71	47	91	10.7	13.5	9.0	11.1	10.4	8.7	-21.8	54.1
	2019	76	3.196	66	49	103	15.4	7.8	7.7	10.3	10.0	9.2	106.3	1.4
	2018	4	3.151	41	89	40	17.3	7.0	9.9	11.4	17.4	20.0	158.8	-29.5
	2017	40	3.035	38	83	48	17.8	13.8	16.9	16.1	15.2	12.9	32.0	-19.7
	2016	92	2.986	30	87	39	15.8	13.0	20.1	16.4	15.9	14.1	23.4	-37.6
	2015	50	3.156	19	99	23	20.6	21.0	17.8	19.7	18.4	18.1	-2.2	20.3
	2014	11	3.232	10	109	11	31.0	20.8	23.7	25.0	23.3	21.5	58.7	-13.9
3.0	2022	144	3.692	99	17	117	5.7	5.6	8.5	6.6	7.6	7.1	3.4	-35.8
	2020	27	3.635	65	67	61	17.0	12.3	7.6	12.3	11.2	11.8	41.2	66.4
	2019	41	3.762	65	51	86	8.2	8.8	14.5	10.6	10.9	10.8	-6.8	-41.5
	2018	16	3.648	47	72	64	13.2	14.3	22.2	16.8	13.8	13.7	-7.8	-38.3
	2017	48	3.544	41	76	47	17.2	13.4	9.1	13.2	15.1	12.3	30.5	50.8
	2016	18	3.621	29	92	28	20.0	18.0	17.1	18.3	15.1	15.4	12.3	5.9
	2015	20	3.568	20	98	20	20.0	23.5	16.4	19.9	22.0	20.0	-16.4	48.4
	2014	9	3.651	9	110	7	32.9	27.0	34.3	31.6	28.6	26.8	26.0	-24.7
3.5	2022	90	4.226	100	15	121	9.3	9.7	10.5	9.8	11.4	10.4	-4.7	-7.1
	2020	4	4.274	70	52	56	37.8	19.5	4.8	21.5	12.5	15.5	116.9	333.8
	2019	19	4.231	59	56	59	6.6	19.8	7.3	11.4	9.1	11.3	-69.0	190.5
	2018	29	4.144	51	67	54	7.5	16.7	11.1	11.9	13.4	11.9	-57.5	55.6
	2017	17	4.081	41	78	32	15.7	9.7	19.1	15.0	14.7	13.3	67.5	-51.7
4.0	2023	5	4.891	111	6	121	6.5	2.7	8.3	6.0	9.0	9.2	143.5	-68.2
	2022	95	4.802	102	13	127	12.6	13.7	9.1	11.8	11.5	9.8	-8.9	54.5
	2019	5	4.883	60	56	43	4.9	18.4	17.2	13.8	12.2	10.4	-75.0	7.4
	2018	7	4.777	54	61	41	27.8	10.0	13.4	17.3	16.7	12.6	204.7	-26.4
4.5	2023	42	5.350	109	6	150	15.1	8.7	32.7	19.4	18.7	18.4	78.4	-76.6
	2022	32	5.234	104	12	114	4.4	11.4	11.6	9.2	10.4	9.6	-63.0	-1.7
5.0	2023	63	5.826	109	5	138	20.5	14.4	24.0	19.6	18.6	18.0	47.1	-43.1
	2022	9	5.724	104	11	97	4.9	3.7	6.7	5.1	19.2	14.3	33.9	-45.8
5.5	2023	64	6.304	113	3	135	9.7	23.2	20.9	17.8	17.4	18.5	-61.3	12.6
6.0	2023	49	6.847	114	3	117	32.0	17.1	14.2	23.5	19.4	18.3	104.2	22.2

Source: Fannie Mae, Freddie Mac, Ginnie Mae, Santander US Capital Markets

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