



Santander US Capital Markets LLC

Single Family Fixed Rate Prepayment Report

January 2025 (December Speeds)

Agency MBS Strategy

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Overview

Product	Agency	Balance (\$mm)	WAC	WAM	WALA	ALS (\$k)	CPR						%Δ	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
Fixed 30	FNMA	2,930,022	4.197	302	51	232	5.9	6.3	8.4	6.9	6.7	6.1	-5.5	-26.2
	FHLMC	2,523,603	4.254	307	46	246	5.9	6.3	8.8	7.0	6.8	6.1	-5.7	-30.0
	GNMA I	51,000	4.736	203	147	86	5.8	5.6	6.4	5.9	6.1	6.0	2.8	-11.9
	GNMA II	2,338,948	4.306	311	43	221	8.3	9.3	12.9	10.2	10.0	8.5	-11.1	-29.4
Fixed 20	FNMA	142,217	3.371	176	58	158	5.2	5.4	6.3	5.7	5.7	5.3	-3.0	-15.1
	FHLMC	110,423	3.305	180	55	168	4.9	4.9	6.0	5.3	5.3	5.0	-0.8	-18.5
Fixed 15	FNMA	347,604	2.893	120	54	124	6.6	6.4	7.4	6.8	6.8	6.5	3.2	-13.5
	FHLMC	283,121	2.989	123	51	133	6.7	6.6	7.9	7.1	7.0	6.6	1.9	-17.3
	GNMA I	504	3.559	35	147	20	16.6	17.2	16.9	16.9	16.9	16.5	-3.6	1.8
	GNMA II	15,429	3.334	113	62	82	9.6	10.0	10.9	10.1	10.1	9.7	-4.5	-8.4
Fixed 10	FNMA	17,062	2.666	71	43	95	9.2	8.9	9.5	9.2	9.2	8.6	3.7	-6.4
	FHLMC	8,125	2.809	76	39	111	8.8	8.0	9.0	8.6	8.7	8.0	10.7	-11.6

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
FNMA	≤ 1.5	73,688	2.504	306	47	323	3.1	3.1	3.6	3.3	3.4	3.2	1.4	-14.2
	2.0	724,274	2.875	308	45	287	3.7	3.8	4.3	3.9	4.2	4.0	-1.3	-11.9
	2.5	570,685	3.300	308	45	253	4.8	4.9	5.4	5.0	5.3	5.1	-0.9	-9.6
	3.0	335,523	3.706	274	76	197	5.4	5.3	5.9	5.6	5.8	5.6	2.2	-10.4
	3.5	246,150	4.122	263	87	172	6.0	5.9	6.5	6.1	6.4	6.2	1.5	-8.6
	4.0	199,873	4.654	270	80	167	6.4	6.2	6.9	6.5	6.8	6.5	2.3	-10.5
	4.5	145,108	5.240	292	60	189	6.6	6.4	6.9	6.6	6.9	6.6	2.7	-7.8
	5.0	162,722	5.872	320	34	239	6.3	6.1	7.4	6.6	6.7	6.4	4.3	-18.2
	5.5	190,859	6.432	330	25	258	7.0	7.7	12.2	8.9	8.2	7.4	-9.5	-38.4
	6.0	167,221	6.927	335	20	268	9.5	12.2	22.7	14.9	12.8	10.8	-23.1	-49.2
	6.5	90,757	7.404	336	18	263	15.8	20.2	33.6	23.7	19.9	16.3	-23.4	-44.5
	7.0	20,127	7.885	333	21	215	27.6	29.8	45.2	34.8	30.1	24.0	-8.5	-40.6
≥ 7.5	3,033	8.430	324	29	145	32.6	35.3	43.1	37.3	33.7	28.1	-9.4	-22.3	
FHLMC	≤ 1.5	105,103	2.529	306	47	321	2.9	2.9	3.4	3.1	3.4	3.3	1.6	-16.4
	2.0	663,387	2.896	309	44	295	3.8	3.7	4.3	3.9	4.2	4.0	2.9	-14.4
	2.5	454,439	3.293	309	44	254	4.7	4.7	5.5	5.0	5.3	5.1	0.4	-15.6
	3.0	250,985	3.729	279	72	199	5.5	5.2	5.9	5.5	5.8	5.6	6.5	-13.5
	3.5	172,619	4.150	267	83	176	5.9	5.9	6.6	6.1	6.4	6.2	1.2	-10.9
	4.0	140,873	4.690	279	72	180	6.2	6.1	7.1	6.5	6.7	6.4	1.6	-13.7
	4.5	111,242	5.258	297	55	202	6.2	6.3	6.9	6.5	6.8	6.4	-2.0	-9.8
	5.0	148,357	5.886	325	29	256	6.1	6.1	7.5	6.5	6.6	6.3	0.4	-20.3
	5.5	190,041	6.444	335	19	280	6.7	7.8	13.2	9.2	8.3	7.4	-14.1	-43.0
	6.0	170,008	6.927	339	16	279	9.5	11.9	22.1	14.6	12.6	10.6	-21.1	-49.3
	6.5	93,061	7.414	340	15	274	15.8	19.4	32.7	23.0	19.7	16.0	-20.0	-45.2
	7.0	20,647	7.890	339	15	242	26.2	29.8	44.4	34.1	29.6	23.1	-13.9	-39.2
≥ 7.5	2,842	8.439	330	23	160	35.5	33.8	43.7	37.9	33.7	27.6	6.0	-27.5	
GNMA I	≤ 1.5	38	2.264	301	56	118	8.2	7.0	5.6	6.9	8.8	8.5	17.4	27.0
	2.0	340	2.689	291	64	114	4.3	4.7	6.0	5.0	4.9	4.6	-9.4	-22.2
	2.5	1,689	3.078	260	90	126	4.4	4.3	4.1	4.3	5.0	4.8	2.9	4.4
	3.0	8,987	3.517	225	123	113	5.0	4.9	6.0	5.3	5.5	5.4	2.6	-18.4
	3.5	8,190	4.037	212	136	100	5.6	5.6	5.8	5.7	5.9	5.7	0.6	-5.2
	4.0	8,777	4.527	203	145	97	6.0	5.7	6.3	6.0	6.1	5.9	5.3	-8.6
	4.5	8,502	5.010	181	168	88	5.8	5.9	6.9	6.2	6.4	6.3	-3.3	-14.2
	5.0	6,155	5.518	172	177	72	6.6	6.2	6.7	6.5	6.8	6.6	6.1	-7.8
	5.5	3,239	6.030	174	177	62	6.6	6.1	7.3	6.7	6.7	6.7	8.2	-17.3
	6.0	2,952	6.556	205	147	65	6.4	5.7	6.7	6.3	6.0	6.2	13.1	-14.8
	6.5	1,356	7.066	233	122	61	5.3	5.2	8.1	6.2	5.8	6.1	1.5	-36.1
	7.0	613	7.539	232	123	49	5.6	6.5	5.0	5.7	5.3	5.3	-14.7	31.8
≥ 7.5	162	8.214	130	225	20	7.6	7.9	7.0	7.5	7.7	8.0	-4.1	12.7	

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
GNMA II	≤ 1.5	5,055	1.979	309	43	287	4.9	2.9	4.9	4.2	4.2	4.0	70.3	-40.7
	2.0	336,187	2.419	309	43	273	5.2	5.1	6.0	5.4	5.7	5.6	2.3	-16.8
	2.5	416,660	2.936	309	44	229	6.2	5.9	6.6	6.3	6.4	6.3	5.1	-11.3
	3.0	304,079	3.434	288	65	183	6.8	6.4	7.1	6.7	6.9	6.6	6.8	-10.3
	3.5	233,082	3.909	271	81	153	6.7	6.5	7.5	6.9	7.0	6.8	3.6	-14.0
	4.0	157,753	4.459	288	67	164	7.0	6.7	7.7	7.1	7.3	7.0	3.5	-13.3
	4.5	156,876	5.002	315	41	217	6.2	6.1	7.5	6.6	6.8	6.6	1.7	-19.0
	5.0	192,075	5.558	334	24	272	6.3	7.0	11.2	8.1	7.8	7.0	-10.8	-38.7
	5.5	213,160	6.065	343	15	299	8.0	12.3	21.6	14.0	12.4	10.1	-36.6	-45.7
	6.0	176,094	6.567	344	13	281	13.8	20.2	31.1	22.0	20.0	16.4	-33.7	-39.0
	6.5	104,315	7.023	344	13	256	22.2	25.5	36.3	28.3	28.0	23.2	-14.6	-34.2
	7.0	35,401	7.491	345	12	250	30.7	32.8	42.3	35.6	37.7	27.7	-7.4	-27.4
≥ 7.5	8,212	7.986	346	11	236	34.7	30.1	39.4	34.8	39.8	29.3	18.4	-27.9	

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
FNMA	2024	289,689	6.685	351	5	328	8.6	9.9	16.8	11.6	10.8	10.2	-13.6	-43.3
	2023	256,249	6.574	336	18	312	10.3	12.8	23.1	15.7	13.2	10.4	-20.3	-47.8
	2022	453,994	4.473	324	31	299	6.1	6.2	7.1	6.5	6.5	6.0	-1.7	-13.8
	2021	792,731	3.024	312	42	269	4.2	4.3	4.7	4.4	4.7	4.5	-2.0	-10.1
	2020	559,314	3.186	299	52	247	4.5	4.4	5.0	4.7	5.0	4.7	0.7	-11.9
	2019	98,697	4.187	285	65	191	6.2	6.2	6.9	6.4	6.7	6.6	0.2	-11.3
	2018	53,835	4.678	271	79	163	7.1	7.0	7.4	7.2	7.6	7.4	2.1	-5.3
	2017	64,995	4.218	258	90	160	6.2	6.3	6.8	6.4	6.7	6.5	-1.6	-6.6
	2016	80,079	3.844	246	101	163	5.5	5.5	5.9	5.7	6.0	5.8	1.0	-8.2
	2015	48,088	4.123	232	114	148	5.9	5.8	6.4	6.0	6.2	6.1	2.0	-9.8
	2014	26,057	4.535	219	127	126	6.6	6.6	7.1	6.7	6.8	6.6	0.6	-7.7
	2013	70,252	3.850	205	139	135	5.7	5.4	5.9	5.7	5.9	5.7	6.2	-9.2
	2012	60,958	3.901	195	149	130	5.9	5.5	6.1	5.8	6.0	5.9	6.4	-10.2
	2011	19,680	4.630	182	162	110	7.1	6.5	6.9	6.8	7.1	6.9	10.2	-6.5
	2010	15,843	4.802	172	173	108	7.0	6.7	7.5	7.1	7.2	7.1	5.0	-10.5
	2009	15,323	5.081	153	192	89	7.9	7.3	7.3	7.5	7.7	7.6	7.5	0.9
2008	3,730	6.158	145	203	82	8.2	8.5	8.1	8.3	8.0	7.6	-3.8	5.0	
2007	3,722	6.486	138	211	77	7.8	7.1	8.3	7.8	7.7	7.5	10.6	-15.3	
2006	2,563	6.519	126	223	69	8.3	7.4	8.0	7.9	7.9	7.8	12.6	-8.1	
≤ 2005	14,221	6.007	98	252	50	8.4	8.2	8.4	8.4	8.5	8.5	2.2	-2.2	
FHLMC	2024	302,706	6.743	351	5	333	8.9	10.5	17.6	12.1	11.4	10.7	-15.5	-42.8
	2023	245,205	6.628	336	17	304	10.2	12.5	23.2	15.6	13.2	10.2	-19.2	-49.1
	2022	405,438	4.454	324	31	295	5.7	5.8	7.1	6.2	6.3	5.8	-1.9	-19.1
	2021	743,307	3.004	312	42	275	4.1	4.0	4.8	4.3	4.6	4.5	2.3	-15.5
	2020	441,238	3.144	299	52	255	4.3	4.2	4.9	4.5	4.8	4.6	2.8	-13.9
	2019	76,698	4.166	284	66	190	6.0	6.0	6.7	6.3	6.7	6.5	0.9	-11.2
	2018	36,178	4.652	269	80	161	6.8	7.4	7.8	7.3	7.6	7.4	-8.1	-5.5
	2017	47,619	4.194	258	90	165	6.0	6.1	6.9	6.3	6.6	6.4	-1.2	-11.7
	2016	55,987	3.873	246	101	169	5.4	5.3	6.0	5.6	5.9	5.8	2.0	-12.6
	2015	35,525	4.089	230	115	149	5.9	5.8	6.6	6.1	6.3	6.1	3.1	-13.6
	2014	18,041	4.467	219	126	130	7.0	5.7	6.6	6.5	6.7	6.4	22.4	-13.7
	2013	40,541	3.819	205	140	134	5.9	5.4	6.1	5.8	5.9	5.7	9.4	-12.0
	2012	29,804	3.923	194	149	126	5.6	5.8	6.1	5.8	6.0	5.8	-4.0	-4.0
	2011	9,800	4.640	181	163	112	6.7	7.5	7.9	7.4	7.3	7.0	-11.4	-5.5
	2010	10,542	4.881	171	173	104	7.7	6.5	7.9	7.4	7.5	7.2	19.0	-18.5
	2009	9,036	5.003	159	186	99	7.7	7.3	7.9	7.6	7.8	7.5	4.4	-7.9
2008	2,498	6.103	146	202	82	7.6	7.8	7.8	7.7	7.6	7.4	-2.3	-0.0	
2007	2,679	6.413	137	212	70	7.6	7.0	8.1	7.6	8.0	8.0	8.4	-14.3	
2006	1,905	6.425	126	223	66	8.1	7.3	8.1	7.8	7.9	7.7	11.9	-10.4	
≤ 2005	8,855	5.984	99	251	48	9.0	8.6	9.2	8.9	9.1	8.8	4.4	-6.5	

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
GNMA I	2024	1,334	6.675	352	6	203	1.7	1.5	1.7	1.6	1.3	1.0	10.3	-9.9
	2023	1,630	6.675	340	18	205	3.9	4.6	5.6	4.7	3.8	3.8	-14.7	-19.1
	2022	1,451	4.780	327	30	178	4.5	4.6	5.7	4.9	4.9	4.6	-2.9	-20.3
	2021	1,015	3.279	315	41	145	4.2	6.0	4.0	4.7	4.8	4.3	-30.8	51.7
	2020	1,333	3.589	300	55	159	5.4	2.9	6.6	5.0	5.3	5.2	89.2	-57.3
	2019	1,094	4.181	289	65	138	5.9	4.5	7.3	5.9	6.2	5.7	30.8	-39.0
	2018	677	4.496	274	79	112	3.7	4.7	3.7	4.0	4.4	4.8	-22.4	28.5
	2017	1,076	4.336	264	90	119	5.6	5.5	5.6	5.5	5.9	5.7	2.2	-1.9
	2016	1,034	3.987	250	102	103	5.3	5.3	6.5	5.7	5.7	5.3	1.2	-19.0
	2015	1,850	4.084	234	115	103	5.4	5.0	7.3	5.9	6.1	6.0	9.4	-32.6
	2014	862	4.246	222	126	84	6.6	5.0	5.2	5.6	5.7	5.7	32.0	-3.9
	2013	6,049	3.608	205	140	100	5.2	5.3	5.5	5.3	5.7	5.6	-2.1	-3.7
	2012	5,811	3.822	196	150	96	5.7	5.6	6.2	5.8	5.9	5.8	0.4	-9.0
	2011	4,792	4.518	185	162	90	6.1	5.6	5.9	5.9	6.1	5.9	7.8	-3.6
	2010	6,869	4.870	174	174	89	5.8	5.8	6.4	6.0	6.2	6.1	-0.3	-8.3
	2009	7,814	5.226	162	185	83	6.4	6.3	7.0	6.6	6.7	6.6	0.7	-10.4
	2008	1,604	6.178	151	197	69	7.1	6.6	6.9	6.8	7.0	7.0	7.9	-4.3
2007	504	6.414	139	210	60	7.3	5.4	8.3	7.0	7.0	6.9	37.1	-36.4	
2006	498	6.292	126	223	54	5.9	6.4	8.7	7.0	6.8	6.7	-8.9	-26.6	
≤ 2005	3,704	6.176	90	260	35	8.2	7.8	9.0	8.3	8.3	8.2	5.9	-14.2	
GNMA II	2024	411,890	6.200	353	5	325	9.0	10.6	15.9	11.6	9.9	8.0	-15.0	-35.4
	2023	290,270	6.161	339	19	289	15.8	21.6	34.0	24.3	24.2	17.5	-29.4	-40.8
	2022	390,634	4.277	326	31	269	8.5	8.8	10.9	9.4	9.0	8.2	-2.9	-20.5
	2021	544,624	2.805	311	42	239	5.9	5.7	6.4	6.0	6.2	6.1	4.8	-12.6
	2020	298,511	3.025	300	53	215	6.0	5.8	6.7	6.2	6.4	6.3	4.3	-14.0
	2019	76,441	4.066	288	66	169	7.1	6.7	7.9	7.2	7.5	7.4	6.3	-15.2
	2018	45,297	4.509	273	80	142	7.4	7.2	8.4	7.6	7.9	7.6	2.9	-15.6
	2017	60,662	3.974	260	91	141	6.6	6.4	7.2	6.7	7.0	6.8	3.4	-12.5
	2016	65,710	3.665	248	102	136	6.2	6.0	6.9	6.4	6.7	6.4	3.1	-13.5
	2015	41,195	3.891	235	115	122	6.3	6.0	7.1	6.5	6.6	6.4	5.4	-16.0
	2014	21,537	4.175	220	127	104	6.3	6.1	6.9	6.4	6.8	6.5	3.3	-11.7
	2013	35,203	3.646	206	140	110	5.9	5.6	6.3	5.9	6.2	5.9	4.7	-10.2
	2012	28,489	3.754	196	149	107	5.7	5.5	6.1	5.8	6.1	5.9	2.5	-10.1
	2011	10,087	4.527	184	162	90	6.0	6.3	6.5	6.3	6.4	6.3	-4.2	-3.1
	2010	9,064	4.925	173	175	88	6.1	5.8	5.9	5.9	6.3	6.2	4.9	-2.2
	2009	4,570	5.237	163	185	84	6.2	5.8	7.7	6.6	6.6	6.5	8.3	-25.4
	2008	1,332	6.260	150	198	69	6.7	7.1	7.0	6.9	7.0	6.8	-6.1	0.9
2007	610	6.475	139	210	62	8.7	7.0	6.6	7.4	7.3	7.0	25.8	5.9	
2006	454	6.330	125	223	55	6.7	7.5	8.5	7.6	7.4	7.3	-11.5	-12.1	
≤ 2005	2,366	6.169	96	254	39	9.1	7.5	8.8	8.5	8.5	8.3	21.5	-15.1	

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
1.5	2021	37,868	2.481	308	45	329	3.0	2.9	3.4	3.1	3.2	3.1	5.0	-14.2
	2020	35,121	2.530	303	49	317	3.2	3.3	3.8	3.4	3.5	3.3	-4.4	-12.1
2.0	2022	46,337	2.934	321	35	338	3.5	3.7	3.8	3.7	3.8	3.6	-6.6	-1.8
	2021	424,640	2.844	312	42	290	3.6	3.7	4.2	3.8	4.1	3.9	-2.1	-12.4
	2020	253,024	2.916	300	50	274	3.9	3.9	4.5	4.1	4.4	4.2	0.9	-12.7
2.5	2022	74,754	3.324	322	34	313	4.7	4.6	5.1	4.8	5.0	4.8	1.9	-9.0
	2021	284,227	3.245	314	41	250	4.9	5.0	5.4	5.1	5.4	5.2	-1.9	-7.5
	2020	195,174	3.362	298	53	241	4.8	4.8	5.5	5.0	5.3	5.1	0.5	-13.4
	2019	11,618	3.478	289	62	275	4.1	5.0	5.0	4.7	5.0	4.9	-18.2	-0.0
3.0	2022	63,949	3.735	323	33	290	5.4	5.2	6.0	5.5	5.6	5.3	5.3	-14.1
	2021	40,481	3.669	314	41	200	5.6	5.9	6.4	6.0	6.4	6.2	-5.1	-7.8
	2020	59,511	3.793	296	55	193	5.8	5.6	6.1	5.8	6.2	6.0	3.7	-7.3
	2019	41,493	3.858	286	64	214	5.6	5.4	6.4	5.8	6.1	6.0	4.1	-17.3
	2016	48,833	3.634	247	100	187	5.1	5.0	5.5	5.2	5.6	5.4	0.9	-8.8
	2013	39,458	3.569	204	140	150	5.4	5.0	5.5	5.3	5.4	5.3	6.6	-8.0
	2012	23,529	3.576	197	146	151	5.1	4.9	5.6	5.2	5.4	5.3	3.4	-12.3
3.5	2022	57,937	4.182	325	32	293	5.7	5.5	6.0	5.7	5.9	5.6	3.0	-7.2
	2019	23,815	4.340	285	65	180	6.5	6.8	7.2	6.9	7.1	7.0	-4.1	-5.3
	2017	30,717	4.032	259	89	174	5.7	6.1	6.4	6.1	6.4	6.1	-5.5	-4.9
	2016	21,011	4.054	245	102	142	6.0	6.1	6.5	6.2	6.4	6.3	-2.8	-5.5
	2015	27,862	4.093	233	113	154	5.9	5.6	6.6	6.0	6.2	6.1	4.5	-15.3
	2013	17,581	4.004	206	139	123	5.7	5.7	6.1	5.8	6.2	5.9	-0.0	-6.0
	2012	26,597	3.993	194	150	127	6.0	5.7	6.4	6.0	6.2	6.0	7.0	-12.2
4.0	2022	59,868	4.811	325	29	308	5.5	5.8	6.5	5.9	6.3	5.8	-4.8	-11.0
	2019	13,463	4.794	282	67	157	7.5	6.8	8.3	7.6	7.8	7.6	11.6	-19.4
	2018	23,810	4.607	271	78	177	6.7	6.6	7.2	6.9	7.4	7.1	2.1	-9.3
	2017	22,010	4.467	259	90	147	7.0	6.6	7.4	7.0	7.2	7.0	6.2	-10.9
	2014	14,412	4.583	219	127	126	6.6	6.7	7.0	6.8	6.8	6.5	-2.6	-3.7
4.5	2024	12,984	5.490	355	3	366	3.7	2.5	2.4	3.0	3.2	3.5	48.0	4.2
	2023	14,586	5.413	335	19	340	5.0	4.0	4.8	4.6	4.7	4.4	25.3	-15.8
	2022	62,175	5.340	326	28	303	6.5	6.5	7.3	6.7	6.9	6.2	0.1	-11.2
	2018	14,550	5.078	273	77	139	8.1	8.4	8.1	8.2	8.5	8.2	-4.1	4.0
5.0	2024	45,287	6.002	354	4	334	4.6	3.7	4.4	4.2	4.1	4.1	25.0	-16.9
	2023	51,754	5.948	334	19	326	5.7	5.6	7.5	6.3	6.1	5.6	1.0	-25.6
	2022	46,328	5.796	327	27	278	7.9	7.7	8.6	8.0	8.1	7.5	3.0	-10.9
5.5	2024	84,809	6.521	351	5	331	5.7	6.4	11.1	7.6	7.0	6.7	-11.5	-43.2
	2023	69,472	6.449	335	18	313	7.5	8.3	14.1	10.0	8.7	7.3	-10.0	-43.2
	2022	26,054	6.271	328	26	275	9.0	9.5	11.4	10.0	9.5	8.4	-5.4	-17.5
6.0	2024	90,667	6.977	351	6	332	8.8	10.7	19.1	12.8	11.4	10.6	-19.2	-46.1
	2023	58,932	6.911	336	17	304	10.3	14.4	29.2	18.5	14.8	11.2	-29.8	-54.6
6.5	2024	41,007	7.454	349	7	314	15.1	17.9	27.4	20.3	17.6	15.6	-16.8	-37.9
	2023	42,740	7.388	337	16	300	16.8	22.6	40.1	27.4	22.5	17.0	-28.2	-49.4

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
1.5	2021	61,901	2.519	308	45	329	2.9	2.9	3.3	3.0	3.3	3.3	0.3	-12.5
	2020	42,754	2.545	303	49	311	3.0	2.9	3.7	3.2	3.4	3.2	3.0	-20.9
2.0	2022	45,817	2.951	321	34	340	3.5	3.3	4.1	3.6	3.9	3.7	8.0	-19.7
	2021	399,510	2.873	312	42	302	3.7	3.6	4.2	3.8	4.1	4.0	2.2	-15.4
	2020	218,034	2.928	301	50	276	3.9	3.8	4.3	4.0	4.3	4.2	3.4	-11.7
2.5	2022	66,920	3.324	322	34	309	4.4	4.6	5.2	4.8	4.9	4.8	-4.0	-12.3
	2021	245,099	3.231	314	40	247	4.8	4.7	5.6	5.0	5.4	5.2	1.8	-16.4
	2020	130,371	3.379	298	53	244	4.7	4.7	5.5	5.0	5.3	5.1	0.4	-14.9
	2019	10,127	3.481	287	63	270	4.1	4.3	5.7	4.7	5.2	5.0	-5.3	-25.4
3.0	2022	58,114	3.736	323	33	274	5.1	4.8	5.6	5.2	5.5	5.2	6.5	-14.8
	2021	31,947	3.632	313	40	181	6.4	5.6	6.6	6.2	6.4	6.2	14.0	-15.4
	2020	38,868	3.840	294	57	202	6.0	5.5	6.5	6.0	6.2	6.0	9.3	-15.5
	2019	33,619	3.884	284	66	211	5.5	5.4	6.5	5.8	6.2	6.0	3.2	-17.6
	2016	35,531	3.698	247	100	189	5.0	4.9	5.5	5.1	5.5	5.4	2.3	-10.8
	2013	23,809	3.561	203	141	148	5.4	5.0	5.6	5.3	5.5	5.3	8.2	-10.7
3.5	2022	45,916	4.221	324	31	283	5.4	5.4	6.1	5.6	6.0	5.7	-1.5	-11.3
	2019	16,503	4.342	284	66	186	7.0	6.2	6.8	6.7	7.2	7.0	14.6	-9.7
	2017	23,215	4.053	259	89	177	5.7	5.9	6.3	6.0	6.3	6.2	-3.9	-6.3
	2016	14,211	4.094	245	103	150	5.9	5.6	6.9	6.1	6.4	6.2	5.4	-19.5
	2015	19,682	4.101	232	114	152	5.9	5.9	6.8	6.2	6.5	6.1	-0.5	-13.5
	2013	10,896	3.998	206	138	124	6.6	5.8	6.4	6.3	6.2	5.9	13.1	-9.6
	2012	13,879	3.993	193	150	123	5.9	5.9	6.2	6.0	6.2	6.0	-0.6	-5.2
4.0	2022	56,306	4.836	326	29	308	5.7	5.3	6.6	5.9	6.1	5.6	6.9	-19.2
	2019	9,207	4.741	282	67	157	6.9	7.5	7.2	7.2	7.6	7.4	-9.3	5.3
	2018	15,239	4.607	270	79	176	6.4	7.1	7.4	7.0	7.4	7.2	-9.2	-4.5
	2017	14,168	4.469	259	90	153	6.4	6.4	8.0	7.0	7.2	7.0	0.3	-20.7
	2014	9,570	4.592	219	126	126	7.2	5.8	6.8	6.6	6.7	6.5	25.7	-14.9
4.5	2024	8,469	5.504	356	3	378	3.8	2.5	2.5	3.0	3.0	3.1	49.8	3.1
	2023	11,061	5.464	335	20	355	4.6	3.9	4.5	4.3	4.5	4.2	20.9	-14.8
	2022	55,386	5.347	326	28	306	5.8	6.3	6.9	6.3	6.7	6.1	-8.4	-8.3
	2018	9,954	5.020	271	77	139	7.6	7.9	8.6	8.0	8.3	8.1	-4.5	-7.7
5.0	2024	46,435	6.009	355	3	354	5.1	4.6	5.4	5.0	4.8	4.8	12.8	-15.0
	2023	45,997	5.959	334	19	323	5.3	5.5	7.2	6.0	5.9	5.3	-3.8	-23.5
	2022	42,415	5.790	327	27	279	7.2	7.3	8.7	7.7	7.8	7.1	-2.0	-16.5
5.5	2024	92,154	6.514	352	5	340	6.0	7.4	12.9	8.6	7.9	7.5	-19.2	-43.8
	2023	70,714	6.456	335	18	310	6.8	7.7	14.1	9.6	8.4	7.0	-12.0	-47.0
	2022	20,827	6.230	327	26	263	8.6	9.0	12.7	10.2	9.3	8.2	-4.4	-30.6
6.0	2024	95,029	6.969	351	5	329	8.9	11.0	18.9	12.9	11.6	10.8	-20.0	-44.1
	2023	61,190	6.909	337	17	292	10.2	13.1	27.2	17.3	13.9	10.4	-23.3	-55.6
6.5	2024	48,312	7.451	350	6	318	15.2	17.0	25.6	19.3	17.2	15.4	-11.5	-37.0
	2023	39,935	7.400	338	15	286	16.7	22.5	40.5	27.5	22.7	16.8	-28.0	-50.5

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
2.0	2022	36	2.674	320	35	145	0.3	9.9	0.2	3.6	2.4	2.5	-97.0	6634.7
	2021	197	2.663	315	41	132	2.7	4.5	7.1	4.8	5.4	4.8	-40.6	-37.3
	2020	27	2.746	306	50	119	12.0	0.1	0.4	4.3	2.2	3.1		-72.6
2.5	2022	131	3.190	323	35	161	4.2	2.6	6.0	4.3	4.4	5.0	66.0	-58.0
	2021	346	3.171	315	41	143	3.4	6.8	3.1	4.5	3.9	4.0	-50.5	124.6
	2020	299	3.053	300	52	141	3.7	2.3	4.5	3.5	4.5	4.2	62.6	-48.8
3.0	2022	193	3.592	323	34	160	3.7	0.9	3.3	2.7	2.2	2.7	294.9	-71.8
	2021	338	3.504	314	42	144	3.8	1.9	2.8	2.8	3.6	3.2	105.2	-34.2
	2020	661	3.527	300	56	172	5.7	2.8	8.2	5.6	6.1	5.7	108.3	-67.1
	2019	328	3.536	291	62	147	6.2	6.5	8.9	7.2	7.9	6.8	-4.7	-27.9
	2017	142	3.548	261	91	99	3.6	3.2	6.8	4.5	5.3	4.6	12.6	-53.8
	2016	287	3.509	251	102	101	4.1	5.4	5.2	4.9	4.5	4.5	-25.6	4.9
	2013	3,976	3.502	206	141	107	4.7	5.0	5.4	5.0	5.5	5.4	-5.4	-7.3
3.5	2022	109	4.130	326	31	166	1.2	2.5	6.3	3.4	3.6	4.0	-52.3	-61.6
	2021	32	4.000	316	42	150	0.0	0.0	0.1	0.0	3.9	4.5	300.6	-87.2
	2020	216	4.008	300	56	155	6.0	2.6	4.1	4.2	4.4	5.3	132.0	-36.2
	2019	266	4.024	291	64	153	7.9	3.9	5.0	5.6	5.6	5.2	103.4	-21.1
	2018	199	4.032	273	80	112	0.3	5.1	3.6	3.0	4.3	4.7	-94.2	44.3
	2017	367	4.006	265	90	120	4.9	5.7	3.8	4.8	5.5	5.0	-13.9	52.5
	2016	216	4.006	250	102	108	3.6	4.5	6.9	5.0	5.6	4.9	-20.1	-35.9
	2015	522	4.003	234	116	102	6.9	4.9	8.1	6.7	6.5	6.0	43.0	-40.2
	2013	1,223	4.001	204	139	85	6.4	6.6	6.3	6.4	6.3	6.1	-2.2	4.9
	2012	2,964	4.008	194	152	93	5.2	5.5	6.1	5.6	6.0	5.9	-6.6	-9.6
4.0	2022	269	4.559	326	32	207	5.5	7.7	6.8	6.7	7.2	5.4	-29.1	12.7
	2019	222	4.519	288	66	131	6.2	4.2	5.7	5.3	5.2	5.4	49.4	-27.9
	2018	233	4.553	275	79	112	7.3	3.9	2.3	4.5	4.3	4.9	90.1	70.8
	2017	259	4.503	264	91	128	7.5	9.7	7.6	8.3	7.3	6.5	-23.8	29.2
4.5	2024	36	5.207	357	3	207	0.1	0.1	0.1	0.1	0.1	0.1	11.9	93.4
	2023	17	5.208	335	21	184	0.1	0.1	0.1	0.1	4.7	4.2	-13.6	-7.2
	2022	220	5.069	329	29	181	3.0	4.6	7.4	5.0	5.2	5.2	-34.8	-39.1
5.0	2024	110	5.709	355	4	192	0.2	0.2	0.2	0.2	0.2	0.3	5.6	24.2
	2023	110	5.672	337	19	159	0.3	3.4	3.2	2.3	2.6	2.5	-90.1	7.9
	2022	247	5.536	329	28	198	4.1	4.3	5.9	4.8	5.6	4.4	-3.7	-27.7
5.5	2024	193	6.165	354	5	202	2.5	0.2	2.0	1.7	1.4	1.1	921.1	-87.6
	2023	409	6.084	339	19	206	3.2	5.1	9.1	5.9	4.3	4.1	-37.7	-44.8
	2022	113	6.085	330	27	169	9.8	0.1	2.5	4.2	3.6	4.4		-96.5
6.0	2024	559	6.684	352	6	211	1.8	1.3	0.2	1.2	1.1	0.8	38.4	767.1
	2023	447	6.605	340	18	195	5.7	5.4	5.1	5.4	4.3	4.0	6.2	5.9
6.5	2024	300	7.134	351	7	196	1.2	1.5	5.2	2.6	1.5	1.2	-22.1	-71.2
	2023	389	7.109	341	17	218	4.3	4.6	6.0	5.0	3.9	4.5	-5.3	-24.1
7.0	2024	122	7.602	348	10	194	2.9	5.4	0.1	2.8	2.2	1.3	-46.6	8815.7
	2023	222	7.545	342	16	222	3.3	3.4	1.8	2.9	2.6	2.8	-2.9	91.8

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
2.0	2022	30,438	2.498	321	34	312	5.5	5.0	6.4	5.6	5.6	5.3	10.4	-22.2
	2021	231,240	2.405	310	42	271	5.2	5.1	6.0	5.5	5.8	5.7	1.7	-15.4
	2020	74,288	2.430	301	49	266	4.9	4.8	5.9	5.2	5.5	5.4	1.4	-19.1
2.5	2022	60,542	3.001	322	35	247	6.8	6.6	7.1	6.8	6.7	6.4	3.6	-7.4
	2021	211,231	2.923	313	41	229	6.2	5.9	6.6	6.2	6.4	6.3	6.3	-11.0
	2020	135,364	2.922	301	52	226	5.9	5.7	6.5	6.0	6.3	6.1	4.0	-12.8
3.0	2022	52,662	3.456	323	34	248	7.8	6.8	7.4	7.3	7.2	6.8	15.2	-8.4
	2021	75,789	3.396	314	41	203	6.9	6.6	7.0	6.8	6.9	6.7	5.6	-7.0
	2020	61,614	3.470	299	55	190	6.9	6.5	7.4	6.9	7.1	6.9	7.6	-13.7
	2019	25,001	3.514	290	64	204	6.9	6.7	7.2	6.9	7.1	6.9	2.3	-6.6
	2017	11,815	3.446	258	92	158	6.2	5.7	6.9	6.3	6.6	6.3	8.9	-17.4
	2016	33,694	3.408	250	100	153	6.0	5.9	6.9	6.2	6.6	6.4	1.7	-15.1
3.5	2022	44,385	3.945	325	33	261	7.4	7.4	8.6	7.8	7.5	7.0	-0.7	-14.0
	2021	17,055	3.887	312	45	195	6.7	6.2	7.6	6.8	7.1	6.8	9.4	-19.7
	2020	18,263	3.927	297	58	156	7.4	7.4	8.4	7.7	7.8	7.5	-0.5	-11.9
	2019	21,455	4.005	289	65	170	7.0	6.3	7.5	6.9	7.4	7.3	11.9	-17.2
	2018	11,316	3.939	269	83	151	7.0	7.2	7.9	7.4	7.6	7.2	-2.7	-9.0
	2017	30,823	3.893	261	90	147	6.3	6.4	7.2	6.6	6.9	6.7	-1.4	-10.4
	2016	23,892	3.881	247	103	126	6.6	6.1	7.0	6.6	6.8	6.5	7.1	-13.0
	2015	22,314	3.876	236	114	125	6.4	5.8	6.9	6.4	6.6	6.4	9.2	-15.9
	2013	10,650	3.834	206	139	103	6.0	5.4	6.8	6.0	6.3	6.0	11.0	-20.8
4.0	2022	58,026	4.517	328	30	294	7.6	7.1	8.5	7.7	7.7	7.1	6.3	-16.6
	2019	14,155	4.506	287	68	149	7.3	7.4	8.4	7.7	8.0	7.8	-1.3	-11.6
	2018	15,945	4.463	274	79	147	7.1	6.8	8.1	7.3	7.7	7.5	3.6	-16.6
	2017	14,401	4.387	261	90	125	7.2	6.6	7.5	7.1	7.3	7.1	9.6	-12.3
4.5	2024	33,043	5.043	355	4	368	1.2	0.9	1.4	1.1	1.1	1.1	30.5	-34.6
	2023	23,593	5.042	338	20	330	6.0	6.2	7.2	6.5	6.0	5.1	-4.0	-14.0
	2022	60,978	5.024	329	28	290	8.3	8.0	9.1	8.5	8.4	7.7	3.4	-12.7
5.0	2024	72,166	5.586	355	4	373	2.5	3.0	5.2	3.4	2.9	2.6	-17.5	-42.5
	2023	58,163	5.582	338	19	329	7.4	9.0	15.3	10.7	9.4	7.2	-18.3	-43.1
	2022	46,671	5.530	330	27	265	10.0	9.6	12.5	10.7	10.2	9.0	4.7	-24.3
5.5	2024	114,453	6.074	353	5	347	5.0	8.7	13.2	8.7	6.6	5.4	-43.6	-35.9
	2023	71,203	6.080	339	18	306	11.1	16.0	30.5	19.7	17.7	12.6	-32.3	-51.8
	2022	23,627	5.994	331	26	260	12.8	17.1	25.3	18.7	16.1	13.0	-26.9	-35.2
6.0	2024	100,089	6.567	352	6	314	10.7	13.6	18.8	14.3	11.1	8.9	-22.2	-29.7
	2023	64,996	6.578	340	17	279	18.1	28.2	44.4	31.4	29.5	21.2	-39.5	-42.9
6.5	2024	57,307	7.017	351	6	278	17.8	15.8	21.8	18.4	15.2	12.1	13.9	-30.1
	2023	42,527	7.034	341	16	257	27.5	36.0	50.0	38.9	39.8	29.2	-27.5	-34.9
7.0	2024	18,667	7.490	350	7	263	27.6	25.5	33.2	28.8	26.0	18.9	10.0	-26.7
	2023	16,116	7.494	343	15	256	34.4	40.2	50.7	42.4	47.4	32.7	-17.6	-26.7

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
FNMA	≤ 1.5	19,595	2.466	192	44	254	2.9	2.8	3.0	2.9	3.1	3.0	3.6	-7.9
	2.0	52,597	2.833	192	44	213	3.5	3.8	4.1	3.8	4.1	3.9	-9.5	-6.6
	2.5	22,617	3.220	184	50	167	4.8	4.7	5.4	5.0	5.1	4.9	2.7	-14.1
	3.0	19,650	3.630	135	97	110	6.3	6.1	7.1	6.5	6.6	6.3	4.4	-15.6
	3.5	10,115	4.061	125	107	90	7.5	6.8	7.7	7.4	7.4	7.2	10.9	-11.2
	4.0	6,719	4.557	134	98	88	8.3	8.0	8.7	8.3	8.3	7.9	3.6	-7.6
	4.5	2,714	5.214	167	67	99	9.9	9.8	9.3	9.7	10.0	9.4	1.2	4.6
	5.0	3,548	5.924	220	15	202	10.0	13.1	17.6	13.3	13.1	12.0	-24.8	-27.1
	5.5	3,008	6.455	222	12	197	12.9	15.0	24.5	17.5	16.9	15.3	-15.2	-41.8
	6.0	1,207	6.913	218	16	142	18.1	23.6	33.8	25.5	23.0	19.7	-25.7	-34.2
	6.5	395	7.408	220	14	128	25.4	29.6	39.7	31.9	28.1	25.0	-16.2	-30.3
	7.0	44	7.864	213	20	101	46.5	33.3	44.4	41.6	31.3	25.8	53.0	-30.5
≥ 7.5	8	8.443	225	12	142	0.8	2.7	57.8	26.4	34.3	34.9	-71.9	-96.8	
FHLMC	≤ 1.5	16,174	2.478	191	44	249	2.9	3.0	3.1	3.0	3.2	3.0	-3.7	-3.6
	2.0	46,015	2.854	192	44	214	3.7	3.6	4.2	3.8	4.0	3.8	2.0	-14.3
	2.5	16,917	3.277	187	48	183	4.3	4.6	4.8	4.6	4.9	4.7	-5.3	-5.0
	3.0	13,911	3.669	142	91	115	6.0	5.9	7.2	6.4	6.4	6.1	2.2	-18.5
	3.5	6,585	4.100	131	101	93	7.5	6.3	7.6	7.2	7.2	7.0	19.2	-17.4
	4.0	3,847	4.620	137	96	87	8.8	7.4	8.3	8.1	8.1	7.9	19.9	-11.6
	4.5	1,818	5.240	173	62	108	7.5	8.9	9.1	8.5	9.2	9.2	-16.9	-2.1
	5.0	2,295	5.899	218	17	193	9.0	10.7	18.0	12.3	11.7	10.8	-16.2	-42.7
	5.5	1,710	6.443	220	14	177	14.3	17.4	29.0	20.3	18.9	17.0	-19.0	-43.9
	6.0	782	6.910	215	19	130	14.4	20.3	33.4	23.1	21.8	18.8	-31.3	-43.8
	6.5	299	7.415	219	16	130	27.9	29.9	44.1	34.5	28.2	23.9	-7.8	-38.4
	7.0	68	7.962	220	15	132	32.3	40.9	58.5	45.5	39.0	27.7	-25.5	-39.3
≥ 7.5	4	8.354	227	12	109	29.5	4.3	8.4	14.7	14.7	10.4	677.4	-49.5	

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
FNMA	2024	6,147	6.269	232	4	263	11.8	14.5	24.4	16.5	16.8	16.2	-19.9	-43.9
	2023	2,348	6.243	213	18	209	14.5	19.2	24.9	19.7	17.2	14.4	-26.4	-25.0
	2022	13,792	3.459	204	33	209	5.5	5.8	6.4	5.9	5.8	5.5	-4.9	-10.3
	2021	54,596	2.766	194	42	210	3.5	3.7	4.0	3.7	4.0	3.8	-7.0	-8.4
	2020	32,152	3.019	182	52	196	4.0	3.9	4.5	4.1	4.3	4.1	2.0	-13.6
	2019	3,180	3.958	166	66	148	6.7	5.7	7.1	6.5	6.6	6.5	18.6	-21.2
	2018	2,673	4.351	151	80	116	7.4	7.0	7.0	7.1	7.4	7.1	6.8	-0.1
	2017	4,683	3.924	141	90	116	6.9	5.9	7.5	6.8	6.7	6.2	17.3	-22.0
	2016	5,828	3.599	131	100	119	6.1	5.3	6.2	5.9	6.0	5.8	14.6	-14.9
	2015	2,940	3.954	117	114	95	6.6	6.7	6.3	6.5	7.2	6.8	-2.0	6.5
	2014	1,701	4.362	106	126	79	7.0	7.2	7.6	7.3	7.6	7.2	-2.9	-4.9
	2013	4,693	3.732	92	139	72	7.5	7.1	8.0	7.5	7.8	7.3	6.5	-11.3
	2012	4,585	3.755	82	149	72	7.9	7.5	8.1	7.8	7.8	7.5	6.4	-8.1
	2011	1,623	4.335	72	161	60	9.4	8.9	8.6	9.0	9.2	9.0	6.8	2.5
	2010	858	4.571	61	171	51	10.3	10.4	11.3	10.7	10.5	10.1	-0.9	-8.5
	2009	293	4.863	49	185	38	13.0	14.9	13.4	13.8	13.3	12.5	-13.4	12.4
	2008	55	5.979	37	199	25	12.4	13.5	13.4	13.1	13.3	12.7	-8.5	0.9
2007	43	6.394	28	210	18	19.1	15.4	14.1	16.2	16.8	15.3	26.5	10.0	
2006	18	6.411	17	222	11	19.4	25.3	21.2	22.0	20.0	19.4	-26.2	22.4	
≤ 2005	10	5.761	8	232	5	42.9	39.6	36.3	39.2	36.0	31.8	10.9	11.4	
FHLMC	2024	3,531	6.219	233	4	275	10.2	13.9	25.7	16.0	16.1	15.7	-28.4	-49.2
	2023	1,753	6.333	215	18	206	15.9	17.5	29.6	21.4	19.0	15.5	-10.0	-44.8
	2022	12,484	3.449	204	33	215	4.8	4.9	5.6	5.1	5.2	4.9	-2.1	-13.5
	2021	45,737	2.789	194	42	216	3.5	3.7	4.1	3.8	4.0	3.7	-4.2	-9.9
	2020	26,419	3.039	183	52	200	4.1	3.8	4.3	4.0	4.2	4.1	8.6	-11.6
	2019	2,962	3.917	169	64	154	5.2	5.6	6.8	5.9	6.4	6.1	-8.3	-18.0
	2018	1,378	4.429	153	79	118	7.2	7.7	5.9	6.9	7.2	6.9	-7.2	32.6
	2017	2,520	3.894	140	91	118	6.5	4.8	8.3	6.6	6.5	6.4	36.3	-43.0
	2016	3,146	3.683	131	101	113	6.4	5.6	7.4	6.5	6.3	5.9	14.9	-24.9
	2015	2,460	3.896	115	116	95	7.2	6.2	6.6	6.7	6.8	6.5	15.9	-5.2
	2014	974	4.321	106	126	80	6.8	6.3	6.4	6.5	6.9	7.1	7.9	-0.8
	2013	2,744	3.734	92	139	72	7.9	6.9	7.7	7.5	7.6	7.2	14.6	-10.5
	2012	2,577	3.815	81	150	67	7.6	7.7	8.6	8.0	8.1	7.9	-0.3	-11.2
	2011	910	4.390	71	161	60	9.4	9.6	9.8	9.6	9.3	9.4	-2.0	-1.7
	2010	623	4.622	61	172	49	9.8	10.7	12.1	10.9	10.7	10.4	-8.8	-12.3
	2009	111	4.877	49	185	38	12.8	11.4	11.5	11.9	12.4	11.8	13.1	-0.4
	2008	33	5.972	36	200	24	9.8	10.6	10.6	10.4	12.7	12.9	-8.6	-0.2
2007	30	6.331	28	210	18	13.1	11.2	12.7	12.3	13.9	14.4	18.1	-12.3	
2006	19	6.399	17	221	11	21.2	17.9	19.7	19.6	21.0	19.5	20.8	-10.0	
≤ 2005	11	5.780	8	231	4	39.5	37.0	37.0	37.7	34.5	31.0	8.6	-0.0	

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
1.5	2021	14,120	2.444	194	42	262	2.9	2.9	3.0	2.9	3.1	3.0	1.3	-3.3
	2020	5,061	2.530	186	49	230	2.7	2.5	3.1	2.7	3.1	3.0	7.3	-19.0
2.0	2022	4,500	2.822	202	35	229	3.9	4.8	4.1	4.3	4.3	4.2	-19.1	15.8
	2021	31,936	2.800	195	41	213	3.3	3.8	4.2	3.8	4.1	3.8	-13.7	-7.6
	2020	16,151	2.902	183	51	207	3.7	3.6	4.0	3.8	4.0	3.8	2.8	-10.8
2.5	2022	3,715	3.148	203	34	202	5.0	4.1	5.0	4.7	4.6	4.6	22.4	-18.5
	2021	7,909	3.137	194	42	156	4.5	4.4	5.2	4.7	4.9	4.6	3.5	-17.2
	2020	8,995	3.319	180	54	179	4.7	4.8	5.5	5.0	5.2	5.0	-2.2	-12.4
	2019	472	3.353	170	63	203	5.9	6.3	6.0	6.1	5.4	5.0	-5.7	5.2
	2016	853	3.188	133	98	144	5.3	4.8	6.4	5.5	5.4	5.2	12.5	-26.2
3.0	2022	2,079	3.583	205	32	195	4.7	5.5	8.5	6.3	5.9	5.4	-15.5	-35.5
	2021	602	3.541	195	41	116	8.6	7.1	6.9	7.5	6.9	6.3	21.9	2.6
	2020	1,629	3.788	177	56	146	5.3	5.5	6.9	5.9	6.0	5.9	-4.2	-21.0
	2019	1,673	3.747	165	67	161	6.6	4.8	7.6	6.3	6.4	6.3	39.9	-38.5
	2017	1,668	3.581	140	91	134	6.6	6.0	6.3	6.3	6.3	5.7	10.3	-4.8
	2016	4,270	3.583	131	100	121	5.8	5.1	6.2	5.7	6.1	5.8	14.8	-18.3
	2015	1,719	3.757	117	114	110	5.8	6.5	5.9	6.1	6.9	6.6	-11.5	11.5
	2013	3,060	3.576	91	140	74	7.4	7.1	8.2	7.6	7.7	7.2	5.1	-13.4
2012	2,511	3.579	84	147	77	7.3	7.0	7.7	7.3	7.4	7.1	4.7	-9.3	
3.5	2022	1,006	4.066	206	31	190	7.6	6.4	5.4	6.5	6.3	6.2	18.1	19.3
	2019	554	4.316	167	66	131	4.7	7.6	7.5	6.6	6.6	6.9	-38.7	0.8
	2018	788	3.934	149	82	130	5.5	6.7	6.9	6.4	6.9	6.3	-19.2	-1.8
	2017	1,863	3.971	141	90	113	6.7	5.9	8.6	7.1	6.8	6.3	13.9	-32.4
	2015	846	4.145	117	114	83	7.7	7.1	6.4	7.0	7.6	7.2	8.3	11.1
	2014	793	4.252	105	126	84	6.8	5.9	7.7	6.8	7.4	6.9	16.3	-24.1
	2013	961	4.107	95	137	67	8.5	6.4	8.1	7.6	8.1	7.7	35.6	-21.7
	2012	1,711	3.988	80	151	67	8.8	7.5	8.7	8.4	8.3	8.1	17.1	-14.3
2011	728	3.999	73	159	65	8.6	8.3	8.6	8.5	8.7	8.7	4.7	-3.6	
4.0	2022	988	4.773	206	29	209	8.3	10.0	13.8	10.8	9.8	8.3	-18.0	-28.5
	2018	1,409	4.496	153	78	117	7.7	7.1	6.8	7.2	7.4	7.2	8.4	4.5
	2017	1,027	4.437	143	89	98	8.2	6.1	7.7	7.3	7.2	7.0	36.2	-21.1
	2014	652	4.647	105	126	71	8.0	8.3	7.7	8.0	7.9	7.7	-2.6	7.0
	2011	601	4.482	71	162	58	9.9	9.5	8.2	9.2	9.2	9.0	4.4	17.1
	2010	438	4.446	62	170	53	8.8	10.2	11.4	10.2	10.4	10.1	-13.9	-11.7
4.5	2024	679	5.532	237	1	351	6.1	8.1	4.2	6.6	6.4	6.4	-25.1	93.8
	2022	586	5.199	206	27	200	12.2	12.6	8.6	11.1	10.5	8.9	-2.9	49.9
5.0	2024	2,281	5.988	234	3	295	9.1	11.6	18.9	12.6	12.6	12.4	-22.9	-40.9
	2023	786	5.912	212	20	232	12.6	17.5	16.4	15.5	13.9	11.6	-29.4	7.3
5.5	2024	2,162	6.483	230	5	261	12.5	13.3	25.7	17.2	17.0	16.3	-6.5	-51.6
	2023	679	6.417	214	18	209	13.6	20.2	23.6	19.3	16.9	13.9	-34.6	-16.2
6.0	2024	714	6.951	229	6	202	16.2	24.6	30.8	24.0	22.9	20.5	-37.0	-23.1
	2023	423	6.886	217	15	195	21.4	22.4	40.9	29.0	24.0	19.6	-5.1	-51.2

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
1.5	2021	12,833	2.466	193	43	252	2.8	2.8	3.1	2.9	3.1	2.9	-0.3	-10.0
	2020	3,119	2.536	186	49	236	3.3	3.6	2.9	3.3	3.3	3.3	-7.8	23.8
2.0	2022	3,890	2.795	203	34	238	3.8	3.2	4.2	3.7	3.9	3.7	16.9	-23.7
	2021	27,393	2.836	195	41	213	3.7	3.8	4.3	3.9	4.1	3.8	-3.7	-10.3
	2020	14,732	2.905	184	51	210	3.6	3.2	4.0	3.6	3.8	3.6	10.7	-19.7
2.5	2022	3,507	3.134	203	34	210	4.1	4.3	4.5	4.3	4.4	4.4	-3.0	-5.2
	2021	5,237	3.280	195	41	173	4.0	4.7	5.0	4.6	5.0	4.8	-15.5	-5.5
	2020	6,831	3.341	181	53	186	4.9	4.5	4.8	4.7	5.0	4.7	8.6	-6.6
	2019	596	3.391	171	62	209	2.6	5.2	4.4	4.1	5.5	5.3	-49.9	20.2
	2016	493	3.295	132	99	142	4.3	5.4	5.0	4.9	5.4	5.3	-21.4	9.1
3.0	2022	2,085	3.565	205	32	203	3.2	4.6	6.2	4.7	4.9	4.5	-29.8	-26.2
	2021	219	3.814	196	41	145	7.3	4.5	8.9	6.9	6.8	6.5	64.7	-50.5
	2020	1,443	3.795	177	56	150	6.4	5.8	6.1	6.1	6.3	6.1	11.7	-6.4
	2019	1,552	3.781	170	63	163	5.3	5.4	6.9	5.9	6.3	5.7	-2.1	-22.7
	2017	1,371	3.690	140	91	128	6.3	4.5	8.2	6.3	6.5	6.2	40.0	-45.8
	2016	2,260	3.668	130	101	113	6.6	5.6	7.8	6.7	6.4	6.0	19.4	-29.3
	2015	1,568	3.709	115	116	105	6.7	6.3	6.6	6.5	6.6	6.3	7.4	-4.8
	2013	1,881	3.569	91	140	74	7.7	7.4	7.9	7.6	7.5	7.2	4.7	-6.6
3.5	2022	1,033	4.053	205	31	195	8.0	6.6	6.3	7.0	6.6	6.1	22.3	5.7
	2019	499	4.334	166	67	134	5.8	4.5	7.8	6.0	6.4	6.6	30.8	-44.1
	2018	449	4.127	151	81	124	6.3	7.6	7.2	7.0	7.2	6.6	-18.0	6.5
	2017	712	4.080	141	90	110	7.5	4.7	9.6	7.3	6.8	6.7	60.8	-52.0
	2015	706	4.154	116	116	85	7.8	5.9	6.3	6.7	6.8	6.9	33.2	-6.8
	2014	501	4.243	106	126	84	7.4	5.8	5.9	6.3	6.8	7.0	28.3	-2.2
	2013	525	4.059	94	137	68	7.4	6.1	6.9	6.8	7.9	7.4	21.7	-11.4
	2012	1,165	3.963	79	152	64	9.0	7.5	8.9	8.5	8.3	8.1	21.4	-17.1
4.0	2022	850	4.759	207	29	212	9.1	7.2	8.9	8.4	8.0	7.0	27.9	-20.5
	2018	642	4.651	154	78	114	7.6	6.5	4.8	6.3	7.3	7.1	18.3	36.6
	2017	328	4.555	142	90	95	6.9	5.5	8.1	6.8	7.0	7.3	27.4	-33.0
	2014	314	4.634	105	128	72	5.7	6.0	6.7	6.2	6.7	6.7	-5.6	-10.4
	2011	363	4.467	70	162	59	10.2	10.0	10.5	10.2	9.3	9.6	2.0	-4.7
	2010	380	4.473	62	171	49	8.9	10.0	11.5	10.2	10.1	10.2	-11.4	-13.0
4.5	2024	496	5.494	238	1	351	4.6	2.3	2.0	3.3	3.7	3.7	101.9	13.7
	2022	488	5.268	207	27	203	6.3	10.0	9.9	8.7	9.9	9.4	-38.6	1.1
5.0	2024	1,392	5.953	234	3	310	6.9	9.7	18.9	11.0	10.7	10.6	-30.4	-51.0
	2023	477	5.939	213	19	229	11.2	10.9	20.5	14.4	12.7	10.5	3.2	-49.6
5.5	2024	1,069	6.462	230	5	267	13.4	18.3	30.7	20.8	19.7	18.9	-28.9	-44.4
	2023	536	6.441	215	18	207	17.0	16.9	28.9	21.2	19.0	15.9	0.2	-45.3
6.0	2024	378	6.950	229	6	207	13.3	17.2	27.3	19.3	18.1	17.0	-24.3	-40.7
	2023	348	6.904	217	16	196	15.9	23.6	40.8	27.8	25.7	20.3	-35.3	-48.2

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
FNMA	≤ 1.5	80,036	2.141	133	43	220	3.9	3.8	4.3	4.0	4.1	3.9	1.7	-11.7
	2.0	132,991	2.571	127	47	158	5.3	5.1	5.7	5.4	5.5	5.3	4.1	-10.4
	2.5	65,883	3.008	100	74	94	7.7	7.2	7.8	7.6	7.7	7.5	8.0	-8.5
	3.0	32,854	3.519	85	88	67	9.6	9.0	9.6	9.4	9.5	9.2	7.3	-6.5
	3.5	14,060	4.064	97	76	60	10.3	10.1	10.7	10.4	10.6	10.3	2.9	-6.4
	4.0	5,938	4.681	128	46	77	10.1	9.9	11.7	10.5	10.9	10.8	1.3	-15.7
	4.5	4,289	5.205	154	20	159	11.3	11.7	14.3	12.4	12.0	11.5	-4.0	-19.1
	5.0	5,138	5.768	161	12	218	12.6	15.6	24.8	17.6	16.0	14.7	-20.2	-40.4
	5.5	3,794	6.272	160	11	187	17.7	17.8	28.4	21.4	20.0	17.9	-0.5	-40.9
6.0	2,136	6.756	159	11	161	20.1	23.4	36.2	27.0	23.6	21.5	-15.7	-40.3	
6.5	484	7.238	161	9	186	28.0	33.1	37.1	32.9	30.8	26.8	-18.1	-12.9	
FHLMC	≤ 1.5	81,686	2.235	132	43	213	4.1	4.1	4.8	4.3	4.5	4.3	1.4	-16.4
	2.0	102,773	2.638	128	46	154	5.4	5.1	5.8	5.5	5.6	5.4	6.1	-12.7
	2.5	40,292	3.090	95	79	87	8.1	7.8	8.4	8.1	8.2	7.9	4.6	-7.8
	3.0	23,447	3.586	89	85	71	9.5	9.2	9.6	9.4	9.5	9.2	2.6	-3.6
	3.5	9,493	4.166	107	66	68	10.2	9.8	10.4	10.1	10.2	9.9	4.2	-5.9
	4.0	6,068	4.785	141	33	108	9.7	9.2	10.0	9.6	10.0	10.0	5.2	-8.3
	4.5	5,325	5.306	160	14	207	10.9	10.6	17.2	12.8	12.2	11.7	3.3	-40.6
	5.0	6,391	5.830	162	11	236	14.0	15.6	24.6	18.0	16.4	14.9	-11.3	-39.6
	5.5	4,607	6.319	161	11	211	17.8	18.2	31.6	22.7	20.7	18.6	-1.9	-46.8
6.0	2,593	6.810	161	11	189	19.4	25.7	33.4	26.5	23.3	21.9	-27.3	-26.6	
6.5	432	7.266	162	9	187	17.3	26.6	46.1	31.3	28.4	27.5	-38.4	-49.2	
7.0	15	7.593	160	13	172	42.2	25.0	63.6	46.4	37.4	34.3	88.4	-70.7	
GNMA I	2.0	4	2.500	34	141	34	18.7	9.0	17.5	15.1	14.0	11.2	117.8	-50.7
	2.5	146	3.000	34	142	29	14.7	14.2	15.2	14.7	14.6	13.8	3.8	-6.9
	3.0	204	3.500	32	147	23	16.4	16.6	16.5	16.5	16.2	15.7	-1.0	0.4
	3.5	89	4.000	40	152	17	17.2	19.5	16.9	17.9	17.4	16.6	-13.0	17.1
	4.0	52	4.500	42	153	10	21.4	22.6	21.2	21.8	22.8	22.1	-6.3	7.5
	4.5	6	5.000	48	158	7	18.9	29.5	27.5	25.8	29.1	28.4	-39.6	8.4
	5.0	1	5.500	37	190	8	7.1	12.1	12.4	10.7	22.9	29.1	-42.9	-2.8
	5.5	1	6.000	36	202	8	12.2	8.0	14.1	11.5	22.3	18.2	54.5	-44.5
	6.0	0	6.500	24	214	6	14.0	15.1	21.4	17.1	32.1	24.2	-7.7	-31.9
6.5	0	7.000	18	222	5	15.8	18.1	13.1	15.6	17.6	25.9	-13.7	42.4	
7.0	0	7.500	34	205	15	0.2	0.2	0.2	0.2	0.2	0.2	8.6	8.1	
≥ 7.5	0	8.000	57	300	19	4.5	4.3	4.2	4.3	4.1	4.7	3.9	3.8	

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
GNMA II	≤ 1.5	729	1.923	134	40	179	4.7	6.2	5.6	5.5	5.8	6.0	-24.0	9.5
	2.0	3,864	2.374	129	43	134	8.0	6.6	8.1	7.6	8.0	7.7	20.7	-18.6
	2.5	3,797	2.901	98	74	77	8.8	9.6	9.8	9.4	9.8	9.6	-8.2	-1.6
	3.0	2,871	3.423	80	94	52	10.7	10.8	11.7	11.1	11.1	11.0	-0.5	-8.5
	3.5	1,678	3.936	92	83	54	11.0	11.1	12.6	11.6	11.0	10.9	-0.6	-12.7
	4.0	623	4.500	125	54	67	14.1	11.7	13.8	13.2	12.8	11.7	21.2	-15.9
	4.5	541	4.996	162	18	155	10.7	10.8	13.6	11.6	11.7	11.3	-0.4	-21.7
	5.0	538	5.554	167	13	180	7.8	17.4	16.4	13.7	11.9	11.0	-57.4	6.9
	5.5	503	6.022	167	15	174	10.9	16.3	11.6	12.9	12.7	12.1	-35.2	44.7
	6.0	261	6.537	165	18	160	19.8	23.5	34.0	26.1	23.6	19.1	-17.6	-35.0
	6.5	16	6.938	172	39	121	22.4	45.3	20.1	29.9	25.0	21.5	-57.3	164.3
	7.0	6	7.461	172	30	106	36.9	1.3	19.1	20.3	13.6	11.6	3456.0	-94.0
≥ 7.5	1	7.959	148	40	58	1.7	1.6	1.6	1.7	1.7	16.4	3.6	1.2	

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
FNMA	2024	8,283	5.909	170	5	237	14.4	16.4	27.8	19.1	18.5	17.9	-13.2	-44.6
	2023	6,855	5.787	152	18	194	14.9	16.1	23.9	18.5	16.6	14.9	-8.5	-35.4
	2022	38,373	3.167	143	32	184	6.1	6.4	6.9	6.5	6.5	6.2	-5.0	-8.3
	2021	138,977	2.385	133	42	177	4.6	4.4	5.1	4.7	4.9	4.7	4.4	-12.7
	2020	84,851	2.699	121	52	158	5.6	5.4	5.8	5.6	5.8	5.6	4.9	-7.6
	2019	11,226	3.533	108	64	115	8.3	7.7	8.4	8.1	8.4	8.1	8.1	-8.9
	2018	5,456	3.958	93	79	85	9.3	8.7	9.4	9.1	9.2	9.1	8.0	-8.5
	2017	10,924	3.401	83	90	85	8.6	7.9	8.9	8.5	8.6	8.4	8.5	-11.4
	2016	14,584	3.054	73	101	82	8.1	7.9	8.7	8.2	8.2	8.0	3.7	-9.7
	2015	7,760	3.317	60	114	63	9.7	8.8	9.9	9.4	9.6	9.3	10.4	-11.6
	2014	4,176	3.612	49	126	46	11.5	10.7	11.5	11.2	11.2	10.9	8.0	-7.5
	2013	8,574	3.085	38	138	40	12.5	11.2	11.4	11.7	11.4	10.9	12.7	-1.9
	2012	5,937	3.148	29	148	32	14.6	13.2	13.6	13.8	13.5	12.7	11.3	-3.1
	2011	1,332	3.757	19	160	18	20.7	19.0	18.8	19.4	19.0	17.9	9.9	1.3
2010	293	4.013	9	170	9	33.7	28.5	28.0	29.8	27.5	24.4	22.2	2.2	
2009	0				1		99.9	94.9	96.5	73.8	48.3		91.8	
FHLMC	2024	12,124	5.845	171	4	266	14.1	15.8	26.9	18.4	17.9	17.6	-11.6	-44.8
	2023	7,698	5.904	153	17	207	14.3	16.3	26.2	19.2	17.0	15.4	-13.5	-40.9
	2022	32,166	3.250	144	32	185	6.3	6.1	7.0	6.5	6.6	6.3	4.4	-14.1
	2021	110,453	2.416	133	42	178	4.8	4.6	5.3	4.9	5.1	4.8	4.6	-14.2
	2020	71,840	2.693	122	52	160	5.4	5.2	6.0	5.5	5.7	5.5	3.4	-13.6
	2019	8,221	3.580	108	64	114	8.1	8.6	8.2	8.3	8.1	8.1	-6.0	5.3
	2018	4,180	4.001	93	79	87	9.0	9.2	9.4	9.2	9.3	9.1	-2.3	-2.2
	2017	8,089	3.435	83	90	86	8.7	8.1	8.6	8.4	8.6	8.3	7.1	-6.0
	2016	9,772	3.110	73	100	81	8.3	8.0	8.7	8.3	8.4	8.1	3.5	-7.9
	2015	6,315	3.312	60	115	62	10.2	9.4	9.8	9.8	9.7	9.3	9.1	-4.5
	2014	2,715	3.578	50	125	47	11.5	10.3	11.1	11.0	11.3	10.8	13.0	-7.7
	2013	5,523	3.060	37	139	40	12.3	11.4	11.1	11.6	11.6	11.1	8.4	3.3
	2012	3,158	3.174	28	149	29	15.3	14.2	15.5	15.0	14.6	13.6	8.5	-9.2
	2011	697	3.794	18	160	17	21.8	20.1	20.2	20.6	19.7	18.7	9.1	-0.2
2010	171	4.068	9	170	9	31.7	29.3	30.8	30.6	27.8	24.7	9.8	-5.8	
2009	0				1		98.4	98.3	98.3	80.2	53.5		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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
GNMA I	2017	1	3.500	90	90	89	77.9	0.0	0.0	38.0	20.8	16.1		2.5
	2016	2	3.221	88	99	64	0.9	0.9	0.2	0.7	3.4	6.2	-4.7	405.8
	2015	7	3.449	72	116	49	1.5	2.3	1.0	1.6	1.9	2.2	-35.0	124.0
	2014	29	3.867	64	126	35	8.5	12.8	7.7	9.7	10.2	9.5	-35.0	70.9
	2013	150	3.367	48	139	30	11.5	11.5	13.0	12.1	12.4	11.8	-0.0	-12.1
	2012	209	3.393	29	150	23	17.4	17.7	17.0	17.4	16.8	15.9	-2.3	4.6
	2011	79	3.976	17	161	14	22.1	21.8	21.3	21.7	21.2	20.0	1.2	3.0
	2010	26	4.408	14	171	6	35.2	36.9	31.3	34.3	31.6	26.7	-5.8	22.4
	2009	1	5.370	53	185	34	0.2	0.3	75.1	41.9	68.3	51.0	-48.7	-99.7
	2008	1	5.922	39	198	24	0.8	1.3	0.3	0.8	11.1	12.6	-43.0	342.9
	2007	0	6.357	30	209	13	6.7	5.2	5.6	5.8	32.1	27.0	29.5	-7.2
	2006	0	6.679	16	223	8	7.5	6.6	5.3	6.4	8.9	12.5	15.7	24.5
	≤ 2005	0	6.396	13	241	3	28.6	35.6	39.6	35.5	36.2	28.6	-23.1	-12.4
GNMA II	2024	1,250	5.651	173	9	193	5.6	12.6	10.9	9.5	8.3	7.9	-57.2	16.4
	2023	628	5.536	156	24	158	19.1	21.3	23.8	21.5	20.0	15.6	-11.3	-12.0
	2022	1,913	3.110	143	32	147	10.2	9.4	12.5	10.7	9.6	9.1	9.1	-26.1
	2021	4,307	2.435	131	41	132	6.9	7.4	7.6	7.3	7.9	7.6	-7.4	-2.4
	2020	1,354	2.928	117	53	120	8.7	7.1	8.2	8.0	8.4	8.3	23.0	-13.6
	2019	612	3.869	108	65	84	9.5	9.4	11.7	10.2	9.6	9.2	1.3	-20.6
	2018	721	3.880	95	78	73	12.1	9.9	11.0	11.0	10.2	10.0	23.7	-10.3
	2017	1,216	3.403	83	90	66	9.0	8.7	9.5	9.1	9.6	9.5	2.9	-8.8
	2016	1,221	3.138	72	101	59	10.9	10.0	10.5	10.5	10.7	10.2	9.6	-5.3
	2015	747	3.307	61	113	48	11.6	11.6	11.9	11.7	11.5	11.4	-0.4	-2.9
	2014	406	3.588	53	125	38	11.1	11.8	13.2	12.1	12.0	12.3	-6.6	-11.0
	2013	575	3.113	38	138	32	12.6	13.1	13.5	13.1	13.5	13.0	-3.8	-3.5
	2012	374	3.236	29	149	26	16.0	17.3	15.5	16.3	16.4	15.6	-7.7	12.2
	2011	89	3.954	23	160	16	19.6	18.2	23.4	20.5	20.7	19.2	8.5	-24.4
	2010	15	4.402	34	171	10	23.4	21.6	24.7	23.3	23.2	21.9	9.1	-13.9
2009	0	6.125	4	191	1	71.8	50.3	100.0	100.0	90.3	53.6	76.7	-92.3	
2008	0	6.000	41	198	12	0.3	0.3	0.3	0.3	0.2	0.2	5.9	4.3	
2007	0	6.375	20	207	11	0.6	48.5	68.0	47.3	37.5	70.6	-99.0	-40.6	
≤ 2005	0	6.154	10	229	10	8.8	31.3	23.8	22.4	40.0	48.7	-75.1	37.8	

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
1.0	2021	2,062	1.884	133	43	258	2.8	3.7	3.2	3.2	3.5	3.2	-25.7	18.2
1.5	2022	5,928	2.177	143	34	240	3.4	4.3	4.5	4.1	4.0	3.9	-22.0	-4.3
	2021	55,634	2.119	134	41	221	3.8	3.6	4.2	3.9	4.0	3.9	5.7	-14.7
2.0	2020	16,070	2.243	125	50	206	4.3	4.2	4.6	4.4	4.6	4.4	2.4	-8.2
	2022	12,645	2.606	142	34	186	5.0	5.2	5.3	5.2	5.1	4.9	-4.2	-1.5
	2021	70,034	2.516	132	42	161	5.1	4.9	5.5	5.2	5.3	5.1	4.8	-12.3
2.5	2020	46,463	2.641	122	52	165	5.5	5.2	5.8	5.5	5.7	5.5	5.9	-10.7
	2013	1,326	2.611	37	140	49	10.7	9.6	10.1	10.1	9.9	9.2	11.9	-4.4
	2022	7,436	3.034	143	33	169	6.0	5.6	6.2	5.9	6.1	5.8	8.6	-10.6
	2021	10,503	2.938	131	43	125	5.8	5.7	6.5	6.0	6.2	5.9	3.1	-13.6
	2020	18,228	3.060	118	54	130	6.7	6.3	6.4	6.4	6.7	6.5	6.9	-1.5
3.0	2019	4,697	3.132	109	63	146	7.4	6.6	8.1	7.4	7.6	7.4	12.5	-19.3
	2017	2,625	2.963	82	91	104	7.5	6.9	7.9	7.4	7.6	7.6	8.4	-12.4
	2016	9,750	2.944	73	100	91	7.8	7.5	8.3	7.9	8.0	7.8	3.4	-9.6
	2015	3,371	3.039	60	114	75	9.1	8.2	9.2	8.8	9.1	8.8	11.7	-12.0
	2013	4,805	2.929	36	140	42	12.7	11.0	11.5	11.7	11.4	10.9	16.2	-4.1
3.5	2012	3,610	2.986	30	147	37	13.7	12.1	12.9	12.9	12.6	11.9	13.6	-6.3
	2022	4,352	3.625	145	31	166	6.2	5.9	6.8	6.3	6.8	6.7	5.0	-13.3
	2020	3,083	3.573	115	57	101	7.2	8.1	7.8	7.7	7.8	7.7	-11.3	2.8
	2019	3,155	3.589	108	64	113	9.1	8.0	8.2	8.4	8.6	8.3	13.8	-2.9
	2018	1,731	3.537	91	81	100	9.4	7.9	9.8	9.1	8.7	8.4	20.9	-20.9
	2017	6,360	3.433	83	89	88	8.9	8.0	9.0	8.6	8.7	8.4	11.0	-11.3
	2016	2,945	3.486	71	103	62	9.6	9.0	10.0	9.5	9.3	9.1	6.9	-9.7
	2015	3,724	3.486	61	113	60	9.9	9.2	10.2	9.7	9.8	9.5	8.3	-10.0
4.0	2014	2,605	3.528	49	126	50	11.3	10.3	11.8	11.1	11.1	10.7	10.2	-12.9
	2013	1,825	3.514	40	136	36	12.8	12.4	11.3	12.2	12.1	11.7	3.3	10.2
	2012	1,731	3.451	27	151	27	17.1	15.3	14.9	15.8	15.2	14.4	12.4	3.2
	2022	3,325	4.144	145	29	186	8.1	8.9	8.8	8.6	8.9	8.2	-9.1	1.3
4.5	2019	2,414	4.085	105	66	92	8.4	8.3	9.7	8.8	9.4	9.3	0.8	-14.6
	2018	2,158	4.045	93	78	85	9.2	9.2	8.9	9.1	9.4	9.2	0.7	3.1
	2017	1,672	3.995	83	90	59	9.6	9.3	10.6	9.8	9.7	9.4	3.6	-13.1
5.0	2024	752	4.883	176	2	348	5.3	5.4	4.8	5.3	5.6	6.0	-2.2	13.7
	2022	2,177	4.684	145	28	174	9.5	9.8	12.2	10.5	10.6	9.5	-3.6	-20.6
5.5	2024	1,298	5.306	174	3	318	7.9	11.4	18.5	11.7	10.9	10.6	-31.9	-40.7
	2023	1,390	5.293	151	20	223	12.4	11.6	12.4	12.1	12.0	11.2	7.0	-6.3
	2022	1,446	5.044	146	27	161	12.4	11.7	13.9	12.7	11.9	11.3	6.1	-17.1
6.0	2024	2,603	5.842	171	4	280	13.3	15.1	30.2	19.0	17.6	16.7	-12.8	-54.1
	2023	1,709	5.753	152	18	196	12.6	15.9	22.3	17.1	15.2	13.9	-22.3	-31.2
6.5	2024	2,000	6.336	168	5	209	19.4	18.4	30.9	22.9	21.7	20.9	6.1	-44.8
	2023	1,573	6.207	152	17	168	16.3	17.3	27.0	20.4	18.6	16.3	-6.0	-39.3
7.0	2024	1,062	6.810	165	6	155	17.7	22.5	31.5	24.1	21.5	20.7	-23.3	-32.1
	2023	1,064	6.701	154	16	168	22.5	24.3	40.1	29.6	25.5	21.9	-8.8	-45.0

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
1.0	2021	3,486	1.897	133	43	250	4.0	2.6	3.4	3.4	3.8	3.6	54.2	-23.9
1.5	2022	5,726	2.235	143	34	240	3.8	3.1	4.1	3.7	3.9	3.8	24.7	-25.3
	2021	50,054	2.216	134	42	215	4.1	4.2	4.9	4.4	4.5	4.3	-2.7	-15.1
2.0	2020	22,382	2.329	125	50	197	4.2	4.2	5.0	4.5	4.7	4.5	1.7	-17.0
	2022	10,026	2.637	142	34	187	4.7	4.5	5.5	4.9	5.1	4.8	3.9	-18.9
	2021	53,558	2.587	133	42	155	5.3	5.0	5.7	5.3	5.5	5.2	6.4	-12.2
	2020	37,082	2.713	121	52	157	5.6	5.3	6.0	5.7	5.8	5.6	6.5	-12.1
2.5	2013	829	2.613	37	140	46	11.0	10.3	10.5	10.6	10.0	9.6	7.0	-2.1
	2022	4,821	3.066	143	33	162	5.4	5.8	6.5	5.9	6.2	6.0	-7.5	-11.8
	2021	2,992	3.123	132	41	116	7.8	5.7	7.7	7.1	7.0	6.6	36.9	-26.1
	2020	10,196	3.188	117	55	130	6.4	6.3	7.7	6.8	6.9	6.8	0.7	-18.2
	2019	3,717	3.211	110	62	138	7.6	8.1	6.9	7.5	7.5	7.4	-6.3	18.9
	2017	2,577	3.023	81	91	99	7.9	6.9	7.6	7.4	8.0	7.5	14.4	-9.6
	2016	6,740	2.990	73	100	90	8.2	7.9	8.5	8.2	8.2	7.8	3.7	-6.4
	2015	3,099	3.059	59	115	72	10.0	8.8	8.9	9.2	9.1	8.8	13.5	-0.6
3.0	2013	3,478	2.959	36	140	40	12.2	11.6	11.1	11.6	11.8	11.2	5.4	5.2
	2012	1,998	3.025	30	147	33	13.9	13.4	14.5	13.9	13.6	12.7	4.1	-8.1
	2022	3,885	3.605	145	31	172	6.8	6.4	7.2	6.8	6.9	6.8	7.3	-12.0
	2020	1,726	3.705	116	57	110	7.8	8.6	7.5	8.0	8.1	7.8	-9.3	13.9
	2019	2,498	3.691	108	64	114	8.3	9.3	8.8	8.8	8.4	8.3	-10.5	6.2
	2018	1,493	3.621	92	81	98	8.5	9.3	8.2	8.7	8.9	8.6	-9.5	15.0
	2017	4,474	3.549	84	89	87	9.0	8.4	8.8	8.7	8.7	8.5	6.5	-4.0
	2016	2,119	3.555	71	102	63	8.6	8.8	9.7	9.0	9.4	9.1	-2.8	-9.4
3.5	2015	2,853	3.524	60	114	57	10.0	9.9	10.6	10.1	10.2	9.7	1.5	-7.0
	2014	1,748	3.554	49	126	49	11.8	10.2	10.8	10.9	11.3	10.8	17.6	-6.3
	2013	967	3.540	40	135	35	13.0	11.8	11.6	12.1	12.0	11.5	11.1	1.6
	2012	969	3.475	25	153	25	18.2	15.9	17.9	17.3	16.7	15.5	15.6	-11.8
	2022	3,075	4.220	145	29	183	9.3	8.5	8.9	8.9	9.0	8.2	8.9	-4.4
	2019	1,279	4.194	105	66	85	9.1	9.1	10.2	9.5	9.0	9.3	-0.2	-10.6
	2018	1,765	4.141	94	78	85	9.0	9.3	9.7	9.4	9.5	9.3	-3.4	-4.0
	2017	897	4.089	82	90	61	9.6	9.9	10.5	10.0	10.0	9.6	-3.1	-6.5
4.0	2024	1,494	4.915	176	2	336	6.8	5.5	3.8	5.8	6.3	6.6	24.9	47.3
	2022	2,529	4.765	146	28	175	10.1	9.9	8.7	9.6	9.6	9.3	2.2	15.0
4.5	2024	2,480	5.357	173	3	320	10.8	9.8	21.5	13.2	12.1	11.8	11.2	-57.3
	2023	1,527	5.343	151	19	231	10.6	10.4	15.9	12.4	11.9	11.1	2.3	-36.7
	2022	1,239	5.170	146	27	170	11.1	11.9	13.7	12.2	12.5	11.5	-6.6	-14.0
5.0	2024	3,732	5.856	170	4	281	13.9	16.5	27.7	19.0	17.7	17.0	-16.7	-44.0
	2023	2,046	5.825	153	18	207	14.3	14.6	21.7	17.0	14.8	13.6	-2.1	-35.2
5.5	2024	2,484	6.349	168	5	236	19.7	18.9	30.4	23.0	21.6	20.8	4.5	-41.6
	2023	1,892	6.293	153	17	190	15.3	17.9	33.7	22.9	20.1	17.6	-15.7	-51.4
6.0	2024	1,331	6.835	167	6	189	18.4	26.0	30.6	25.1	22.4	21.6	-32.3	-17.6
	2023	1,241	6.783	155	15	190	20.5	25.8	36.4	28.1	24.4	22.2	-22.8	-33.6

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
2.5	2016	1	3.000	79	98	60	1.0	1.1	0.2	0.8	4.0	7.2	-4.7	405.8
	2015	3	3.000	62	115	51	1.1	1.4	1.1	1.2	2.5	3.2	-17.6	26.8
	2013	73	3.000	36	140	30	13.5	13.0	14.8	13.8	14.1	13.5	3.7	-12.8
	2012	64	3.000	29	148	27	17.4	17.0	17.2	17.2	16.7	15.3	2.4	-1.4
3.0	2017	1	3.500	90	90	89	77.9	0.0	0.0	38.0	20.8	16.1		2.5
	2015	2	3.500	62	117	45	3.0	5.1	1.5	3.2	2.1	1.6	-42.5	237.9
	2014	11	3.500	48	127	36	7.0	20.2	13.6	13.8	15.3	13.4	-67.8	53.9
	2013	43	3.500	50	139	29	10.0	10.6	14.5	11.8	11.6	11.6	-5.6	-28.6
3.5	2012	124	3.500	26	151	21	18.3	19.0	17.5	18.3	17.6	16.9	-3.7	9.1
	2014	4	4.000	45	129	28	8.5	29.5	12.5	17.4	15.2	13.7	-74.1	158.9
	2013	24	4.000	71	138	29	8.4	11.9	5.5	8.6	8.7	8.1	-31.1	123.5

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
1.5	2022	175	1.969	138	35	191	6.5	4.8	10.8	7.4	6.2	6.0	37.8	-56.9
	2021	542	1.907	133	40	185	3.8	6.5	3.9	4.7	5.6	5.9	-41.4	66.5
2.0	2022	587	2.387	140	34	153	9.1	6.4	8.2	7.9	7.4	6.7	43.2	-22.1
	2021	2,791	2.361	130	41	136	7.6	6.7	8.2	7.5	8.1	7.7	13.8	-19.1
	2020	378	2.419	118	50	147	8.0	5.6	7.2	6.9	7.3	7.8	45.3	-23.0
2.5	2022	452	2.897	142	33	137	7.7	7.4	11.3	8.9	8.4	8.9	4.8	-35.9
	2021	878	2.878	130	42	112	6.1	9.6	7.2	7.7	8.4	8.2	-37.0	34.0
	2020	642	2.899	118	53	123	7.3	6.9	7.1	7.1	7.8	7.8	6.8	-3.8
	2017	373	2.924	82	91	80	9.2	8.8	7.9	8.6	9.0	8.9	5.0	11.5
	2016	689	2.910	72	100	68	10.1	10.6	10.5	10.4	10.9	10.0	-4.9	0.2
	2015	244	2.937	59	114	61	12.1	10.9	12.6	11.9	12.0	11.3	12.4	-14.4
	2012	269	2.854	36	140	34	13.7	14.5	14.2	14.2	13.7	13.2	-6.2	2.6
3.0	2022	220	3.447	144	32	133	6.3	11.0	14.9	10.8	9.9	9.3	-44.4	-27.7
	2020	253	3.443	115	56	99	12.1	10.1	11.0	11.1	10.8	9.8	21.4	-9.0
	2019	207	3.479	110	63	96	6.4	9.6	10.2	8.8	8.9	9.0	-34.0	-6.6
	2018	139	3.452	92	80	80	13.6	9.9	7.5	10.4	9.5	8.4	40.5	33.0
	2017	501	3.448	83	89	64	9.5	8.9	10.3	9.6	10.0	9.9	7.2	-14.9
	2016	437	3.421	71	102	51	12.1	9.6	10.4	10.7	10.5	10.3	28.3	-8.9
	2015	408	3.411	61	113	44	11.4	11.5	11.9	11.6	11.3	11.6	-0.7	-3.9
	2014	215	3.413	50	124	41	9.7	11.6	13.6	11.7	11.7	12.4	-16.9	-15.7
	2012	188	3.355	38	138	30	10.6	11.8	13.5	12.0	13.3	13.1	-10.2	-13.6
3.5	2022	175	3.944	146	29	144	9.0	17.0	14.5	13.6	10.9	11.9	-49.4	19.1
	2019	234	3.975	107	66	82	9.2	7.8	13.0	10.1	9.1	9.1	19.2	-41.6
	2018	442	3.982	96	77	72	12.7	10.0	12.0	11.6	10.6	10.3	28.3	-17.3
	2017	311	3.928	85	89	56	8.1	8.7	10.4	9.1	9.9	9.6	-7.6	-17.3
	2014	125	3.853	49	126	32	14.4	13.5	12.6	13.5	13.0	13.1	7.7	7.6
4.0	2024	94	4.614	175	3	218	0.9	1.1	8.9	2.7	2.6	3.6	-18.9	-88.3
	2022	170	4.478	148	28	150	22.3	15.6	17.4	18.5	16.3	13.2	47.7	-11.3
	2019	130	4.541	106	68	67	15.2	11.6	7.9	11.6	11.2	10.1	34.5	49.8
	2018	92	4.474	101	75	64	11.4	11.5	12.4	11.8	11.1	10.4	-1.6	-7.5
4.5	2024	257	5.008	175	6	220	4.1	4.9	13.2	6.6	5.5	5.5	-17.4	-64.2
	2023	171	5.036	158	19	186	14.2	18.0	8.4	13.6	14.1	12.2	-22.8	124.2
	2022	95	4.928	148	27	146	20.8	10.1	22.4	17.9	15.9	13.9	117.8	-57.7
5.0	2024	356	5.565	173	8	198	3.6	15.4	12.6	10.2	7.8	7.2	-78.0	23.5
	2023	151	5.552	157	21	166	17.3	20.2	21.7	19.8	17.3	14.4	-15.6	-8.0
5.5	2024	360	6.037	171	11	187	4.9	14.5	6.7	8.7	8.1	7.4	-67.8	125.7
	2023	134	5.995	158	25	155	23.8	21.4	20.1	21.8	20.8	16.5	12.5	7.4
6.0	2024	160	6.549	169	15	168	13.6	15.5	15.9	15.0	13.2	12.4	-13.4	-2.5
	2023	101	6.519	159	22	149	28.8	34.1	53.2	40.0	35.1	24.1	-18.3	-44.2

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
FNMA	≤ 1.5	8,845	2.194	74	41	126	6.8	6.8	7.0	6.9	6.9	6.4	-0.8	-1.9
	2.0	4,702	2.610	70	44	97	9.1	8.3	9.1	8.8	8.8	8.3	9.7	-8.8
	2.5	1,505	3.045	54	61	53	13.4	12.0	14.2	13.2	13.3	12.7	12.4	-16.2
	3.0	724	3.576	52	63	43	14.9	14.8	14.9	14.9	15.0	14.6	1.2	-0.9
	3.5	384	4.104	55	60	47	13.2	14.1	14.1	13.8	14.3	14.7	-6.7	-0.1
	4.0	218	4.725	80	35	71	14.5	12.2	12.3	13.0	13.7	13.5	20.5	-1.1
	4.5	161	5.266	104	11	142	17.6	15.8	11.1	15.2	16.0	15.9	12.7	46.3
	5.0	294	5.817	106	8	169	18.9	22.1	25.7	22.2	18.5	17.7	-15.6	-16.1
	5.5	159	6.316	105	9	144	19.5	19.8	27.8	22.5	21.5	22.4	-1.7	-32.0
	6.0	67	6.845	102	10	119	32.2	34.7	32.7	33.2	34.2	28.3	-8.8	7.7
6.5	2	7.284	100	6	122	91.3	21.5	11.9	58.3	60.4	67.1	820.8	90.4	
FHLMC	≤ 1.5	4,764	2.195	75	41	132	6.8	5.7	6.8	6.4	6.6	6.2	20.2	-16.6
	2.0	1,713	2.695	72	43	102	7.6	7.4	9.0	8.0	8.0	7.5	2.4	-18.3
	2.5	425	3.151	61	56	55	13.8	10.4	11.0	11.7	11.6	11.6	34.8	-5.8
	3.0	208	3.672	64	54	53	14.0	11.7	12.9	12.9	12.9	13.1	21.8	-10.3
	3.5	140	4.239	75	42	59	12.0	12.9	10.3	11.8	13.6	12.9	-7.3	26.4
	4.0	178	4.857	99	16	121	13.1	16.4	10.7	13.7	13.6	13.0	-21.6	58.0
	4.5	198	5.349	106	9	156	10.4	13.5	18.1	13.7	13.5	13.2	-23.7	-27.3
	5.0	219	5.857	105	8	152	19.4	16.7	24.5	20.1	22.6	22.2	17.9	-34.9
	5.5	161	6.330	105	10	135	19.1	26.5	19.5	21.8	22.7	21.0	-30.9	41.3
	6.0	111	6.870	104	11	106	25.7	19.8	24.2	23.3	21.2	20.3	34.2	-19.9
6.5	8	7.307	104	10	91	43.8	42.1	33.2	39.7	34.0	30.6	5.5	34.4	

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
FNMA	2024	536	5.810	110	5	176	18.7	18.3	22.0	19.5	19.3	19.6	2.7	-18.9
	2023	190	5.754	94	18	122	23.8	25.0	27.8	25.6	22.1	20.2	-5.3	-11.6
	2022	2,510	2.874	82	33	118	8.8	7.8	8.8	8.5	8.4	7.9	12.9	-10.9
	2021	9,621	2.284	73	41	116	7.0	7.1	7.5	7.2	7.3	6.8	-1.3	-5.9
	2020	2,901	2.649	62	52	98	10.1	9.4	9.4	9.6	9.7	9.0	8.6	-0.3
	2019	346	3.544	51	64	64	13.0	11.9	13.1	12.7	12.4	12.0	9.7	-9.6
	2018	240	3.896	37	79	39	14.9	16.7	17.1	16.2	15.9	14.9	-11.5	-2.5
	2017	352	3.293	27	90	34	18.6	16.2	16.4	17.0	16.5	15.9	15.9	-1.5
	2016	312	2.961	18	100	25	20.2	18.5	19.1	19.2	18.9	17.3	10.2	-3.6
	2015	54	3.203	8	111	8	37.7	34.4	34.6	35.4	31.3	26.7	12.0	-0.6
2014	0						99.8	97.1	97.5	74.4	48.2			57.8
FHLMC	2024	582	5.743	111	4	172	17.6	18.2	23.7	19.5	21.4	21.9	-3.6	-25.4
	2023	199	6.128	95	17	113	16.4	17.7	18.3	17.5	18.0	17.1	-7.7	-3.8
	2022	1,317	2.896	83	33	120	9.7	7.7	7.5	8.3	7.9	7.4	27.9	1.9
	2021	4,541	2.275	75	41	122	6.7	5.9	7.2	6.6	6.8	6.5	15.6	-19.3
	2020	1,213	2.610	63	52	110	7.6	7.8	8.2	7.8	8.4	7.7	-3.1	-4.6
	2019	103	3.521	51	64	71	9.8	13.5	7.7	10.3	10.8	11.2	-29.1	80.7
	2018	35	4.005	37	82	39	13.7	14.0	19.5	15.9	16.2	15.7	-2.2	-30.5
	2017	59	3.443	28	93	30	18.0	15.6	17.8	17.1	16.9	16.0	16.2	-12.9
	2016	58	3.052	18	101	21	26.6	18.8	23.1	22.8	20.8	18.5	47.7	-20.3
	2015	18	3.376	10	118	8	34.2	30.1	34.4	33.0	30.0	27.1	16.5	-15.0
2014	0	3.977	28	152	17	23.4	19.7	88.1	68.0	79.2	50.9	20.9	-88.8	
2011	0	5.250	16	164	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
1.5	2022	914	2.249	81	34	139	7.0	6.7	6.3	6.7	6.6	5.8	5.3	7.3
	2021	7,356	2.182	74	41	125	6.5	6.6	7.0	6.7	6.8	6.4	-1.0	-6.0
	2020	574	2.259	65	49	115	9.6	10.0	7.6	9.1	8.3	7.5	-4.6	33.8
2.0	2022	822	2.699	81	33	111	8.2	6.6	9.5	8.1	7.6	7.2	24.2	-30.8
	2021	2,223	2.605	71	42	93	8.4	8.5	9.0	8.7	8.6	8.1	-1.2	-5.5
	2020	1,596	2.573	63	51	102	10.3	8.6	8.8	9.2	9.4	8.8	19.6	-1.8
	2016	42	2.568	19	99	33	15.1	15.8	14.9	15.3	15.4	12.5	-4.6	6.3
2.5	2022	315	3.195	83	32	105	10.8	6.4	11.6	9.6	9.9	9.0	73.9	-46.5
	2021	37	3.099	72	42	54	9.1	12.3	14.1	11.9	11.7	10.1	-27.2	-13.1
	2020	618	3.023	60	55	86	10.6	10.4	11.8	10.9	11.2	10.7	1.8	-12.6
	2019	130	3.061	53	62	84	11.0	9.7	11.7	10.8	10.8	10.3	15.1	-17.9
	2018	14	3.063	34	83	51	7.4	11.1	19.3	12.9	14.0	11.7	-34.4	-45.2
	2017	132	2.965	27	91	40	19.0	17.3	16.0	17.4	15.6	14.3	10.6	9.0
	2016	221	2.914	18	100	26	20.0	17.9	19.5	19.1	18.8	17.3	13.0	-9.3
3.0	2022	211	3.752	84	31	103	10.9	13.5	10.6	11.7	12.3	11.1	-20.5	28.6
	2020	102	3.592	56	58	62	8.5	10.6	14.0	11.1	12.5	11.9	-21.2	-25.5
	2019	105	3.579	50	64	67	16.5	12.3	13.6	14.1	12.9	12.4	37.2	-10.4
	2018	67	3.482	35	81	43	17.5	19.2	15.9	17.5	15.6	14.8	-9.8	22.6
	2017	167	3.398	28	89	34	17.7	14.9	17.0	16.5	16.6	16.5	20.1	-13.2
	2016	45	3.475	17	101	17	24.7	23.2	20.5	22.7	21.8	20.7	7.6	15.2
3.5	2022	9	4.478	117	1	222	6.0	6.7		6.4	6.4	6.4	-9.6	
	2020	117	4.254	85	29	114	9.6	8.5	6.9	8.3	10.3	12.7	14.4	23.4
	2019	81	4.064	47	67	51	10.5	16.1	15.2	14.0	14.2	14.2	-37.1	7.0
	2018	115	4.001	37	79	39	15.9	17.1	19.6	17.6	16.3	15.3	-7.5	-13.9
	2017	46	3.964	27	89	25	20.6	18.2	15.5	18.1	18.0	18.1	14.4	19.1
4.0	2024	43	4.842	114	3	182	7.2	8.3	4.4	6.9	6.0	5.5	-13.4	90.3
	2023	21	4.824	91	20	146	32.5	18.1	22.6	24.5	16.8	16.8	94.6	-21.9
	2022	92	4.738	86	28	110	14.3	11.9	12.1	12.8	13.6	13.2	21.6	-1.5
	2019	19	4.730	47	69	33	18.3	11.4	14.1	14.6	14.5	13.0	66.2	-20.3
	2018	43	4.531	40	76	34	10.5	13.4	11.1	11.7	15.6	14.8	-22.9	22.3
4.5	2024	102	5.297	113	3	183	16.1	10.6	6.9	12.2	14.8	17.1	56.6	55.0
	2023	30	5.289	92	20	138	20.3	14.9	16.4	17.2	16.3	15.6	40.6	-10.3
	2022	27	5.134	88	26	89	20.0	29.4	11.3	20.5	17.4	15.1	-35.6	187.4
5.0	2024	224	5.840	110	5	195	19.3	17.7	23.0	19.9	17.2	17.1	10.2	-25.4
	2023	60	5.776	94	18	127	17.9	36.1	33.5	29.8	21.7	19.2	-55.4	9.3
	2022	11	5.581	87	25	92	17.1	17.9	22.7	19.3	17.8	15.4	-5.1	-23.1
5.5	2024	116	6.346	109	6	161	17.9	21.9	29.0	23.1	22.2	22.1	-20.3	-27.3
	2023	42	6.230	95	17	113	24.1	14.1	24.6	21.1	20.2	22.7	80.2	-45.8
6.0	2024	38	6.856	105	7	124	29.2	34.6	26.6	30.2	31.5	28.7	-18.5	36.4
	2023	28	6.830	99	14	113	36.1	34.9	39.7	36.9	37.3	28.0	4.3	-14.9

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	
							Dec	Nov	Oct	3M	6M	12M	Nov→Dec	Oct→Nov
1.5	2022	519	2.190	81	34	144	7.8	4.8	5.6	6.0	5.9	5.2	66.4	-14.8
	2021	3,668	2.171	75	41	131	6.5	5.6	7.0	6.4	6.6	6.3	15.9	-19.4
	2020	576	2.354	66	49	129	7.4	6.6	6.5	6.8	7.4	6.7	13.6	0.8
2.0	2022	372	2.677	82	33	115	8.2	6.7	8.4	7.8	7.5	6.8	24.2	-20.7
	2021	832	2.686	73	42	98	7.6	6.9	8.4	7.6	7.6	7.4	10.2	-19.0
	2020	493	2.722	62	52	110	6.8	8.6	10.3	8.6	8.8	8.1	-21.8	-16.9
	2016	7	2.654	19	100	28	10.2	14.0	12.0	12.1	12.9	14.2	-28.6	18.0
2.5	2022	135	3.159	83	32	104	12.4	5.5	8.3	8.8	7.9	7.8	134.1	-34.8
	2021	40	3.278	74	41	77	10.4	4.0	4.7	6.4	6.9	7.4	168.5	-15.1
	2020	122	3.157	58	60	75	11.2	9.7	7.3	9.4	10.1	10.0	16.0	35.6
	2019	53	3.193	53	63	84	6.4	13.5	8.3	9.5	9.5	10.7	-54.4	67.5
	2018	2	3.212	32	95	28	12.7	10.4	65.2	36.6	25.9	23.3	23.6	-89.2
	2017	21	3.038	26	97	33	16.9	17.0	15.7	16.5	17.1	14.9	-0.7	9.0
	2016	41	2.973	18	100	23	29.1	19.7	22.9	23.8	21.4	18.6	56.2	-15.7
3.0	2022	113	3.692	84	31	100	13.0	7.3	12.2	10.9	10.0	9.8	83.0	-41.4
	2020	18	3.640	53	77	50	8.6	11.7	7.7	9.3	13.7	12.9	-28.2	55.2
	2019	29	3.761	52	65	72	9.0	18.0	3.7	10.4	12.4	12.0	-52.2	424.2
	2018	10	3.644	35	85	46	14.2	9.4	13.1	12.3	14.9	15.8	55.6	-29.7
	2017	26	3.550	29	90	33	21.3	17.2	17.7	18.7	16.5	17.1	26.6	-3.3
	2016	7	3.618	17	106	16	27.5	18.2	30.3	25.6	23.8	21.4	59.1	-43.9
3.5	2024	23	4.486	117	1	275	23.3	5.4		15.4	15.4	15.4	371.7	
	2022	69	4.220	86	29	103	7.5	15.8	4.9	9.5	12.2	10.8	-54.2	242.1
	2019	13	4.227	46	69	47	13.1	5.4	13.7	10.8	10.7	11.5	152.6	-62.2
	2018	18	4.147	38	79	40	10.9	16.3	15.4	14.3	15.2	15.1	-35.0	6.0
	2017	9	4.076	28	91	22	12.6	7.8	23.9	15.2	17.0	15.6	65.0	-69.9
4.0	2024	92	4.900	115	1	233	12.7	16.0	14.6	14.3	13.8	13.4	-21.5	10.1
	2023	5	4.899	97	18	112	2.7	23.2	1.8	9.8	9.0	8.3	-89.3	1330.3
	2022	71	4.806	87	27	109	13.2	17.1	8.8	13.1	13.4	12.8	-24.2	101.1
	2019	3	4.865	46	69	33	24.0	5.3	5.7	11.9	13.8	14.4	396.7	-5.7
	2018	5	4.799	41	75	31	22.1	13.8	19.5	18.5	14.8	12.0	67.6	-31.6
4.5	2024	139	5.371	113	3	189	8.3	16.1	20.6	14.3	15.5	15.7	-50.5	-23.6
	2023	33	5.352	94	20	130	15.4	6.5	14.0	12.0	10.8	12.2	146.8	-55.0
	2022	26	5.226	88	26	100	15.5	10.1	14.6	13.4	10.0	10.1	57.1	-31.9
5.0	2024	160	5.875	109	4	175	19.9	15.3	30.9	21.9	25.2	26.7	33.4	-54.7
	2023	53	5.822	93	18	120	12.8	16.6	10.2	13.2	16.8	16.1	-24.5	68.1
	2022	7	5.715	89	25	81	50.5	41.4	2.2	33.7	22.7	22.4	30.7	2213.5
5.5	2024	106	6.345	110	6	152	19.9	27.1	20.5	22.6	23.6	21.7	-29.5	37.1
	2023	52	6.296	96	17	115	15.4	18.2	19.1	17.6	20.6	19.4	-16.7	-5.3
6.0	2024	57	6.879	109	6	114	28.2	15.4	19.2	21.1	21.1	22.4	97.1	-21.5
	2023	53	6.859	98	15	100	23.2	24.4	29.0	25.6	21.6	19.2	-5.5	-17.9

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

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