

# FNMA Prepayment Speed Comparison

## June 2019

### FNMA Jumbos vs FNMA Generic

	Jumbo Data		CPR Differences vs Generic					% CPR Differences vs Generic				
	Cur Bal (MM)	CPR (Jun)	Jun	May	3mo	6mo	12mo	Jun	May	3mo	6mo	12mo
15yr Jumbo 2	77	7.0	-2.8	-3.2	-3.8	-3.3	-0.3	-39%	-54%	-78%	-79%	-4%
2013	57	9.0	-1.8	-2.4	-3.3	-2.9	-0.3	-20%	-31%	-52%	-55%	-3%
15yr Jumbo 2.5	1,599	10.2	-0.7	-2.7	-1.9	-1.5	-1.7	-7%	-38%	-24%	-21%	-25%
2017	94	6.1	-2.8	-7.1	-5.1	-3.9	-3.1	-45%	-588%	-167%	-143%	-91%
2016	603	8.0	-2.2	-0.7	-1.6	-1.5	-1.6	-28%	-9%	-21%	-24%	-25%
2015	242	12.6	1.1	-2.8	-0.8	-0.4	-1.7	9%	-39%	-8%	-4%	-24%
2014	36	2.3	-9.3	-11.0	-4.9	-3.7	-3.4	-399%	-681%	-75%	-63%	-52%
2013	366	9.0	-2.0	-2.2	-2.8	-1.4	-1.5	-23%	-28%	-38%	-19%	-19%
2012	249	17.1	5.2	-4.8	-0.5	-0.9	-1.4	30%	-80%	-4%	-11%	-18%
15yr Jumbo 3	356	13.9	1.3	2.4	0.8	-0.7	0.2	10%	18%	7%	-8%	2%
2017	75	7.7	-3.8	-9.1	-7.1	-4.8	-0.9	-49%	-1219%	-224%	-123%	-13%
2012	75	16.0	2.5	-2.4	0.5	-1.2	-1.0	16%	-26%	4%	-12%	-10%
2011	142	20.8	7.2	1.3	3.7	1.3	1.4	35%	10%	23%	10%	11%
15yr Jumbo 3.5	133	11.9	-2.0	-3.5	-2.6	-1.7	0.3	-17%	-38%	-26%	-19%	2%
2011	80	13.1	-1.4	-5.2	-3.8	-3.9	-1.1	-10%	-63%	-40%	-48%	-10%
30yr Jumbo 2.5	316	9.3	1.9	7.7	3.0	0.8	-0.1	20%	52%	31%	14%	-2%
2016	164	4.4	-2.7	14.6	4.9	2.2	-0.5	-61%	71%	44%	31%	-11%
2012	142	15.1	7.1	1.0	1.3	-0.3	0.7	47%	12%	16%	-5%	9%
30yr Jumbo 3	28,423	8.7	-1.4	-1.4	-1.3	-1.4	-1.7	-16%	-21%	-19%	-25%	-30%
2019	550	3.4	1.1	0.6	0.0	-	-	32%	19%	-2%	-	-
2018	124	0.5	-4.6	1.8	-1.7	-2.0	-1.4	-848%	33%	-74%	-156%	-87%
2017	1,177	11.7	4.0	1.8	2.1	0.2	-0.5	34%	24%	26%	3%	-12%
2016	12,426	9.4	-1.1	-2.2	-1.6	-1.4	-1.7	-11%	-34%	-22%	-24%	-31%
2015	2,566	8.0	-2.7	-1.2	-1.4	-1.8	-1.8	-34%	-15%	-19%	-31%	-29%
2014	487	7.8	-2.0	-2.9	-2.9	-2.1	-3.3	-25%	-50%	-47%	-39%	-69%
2013	5,467	8.6	-1.5	-0.7	-1.0	-1.1	-1.3	-17%	-8%	-13%	-18%	-20%
2012	5,625	7.4	-2.2	-1.0	-1.7	-1.6	-1.9	-29%	-15%	-26%	-31%	-34%
30yr Jumbo 3.5	24,728	12.5	0.9	1.6	0.8	-0.2	-0.9	7%	13%	7%	-2%	-11%
2019	980	8.2	2.7	-2.8	-0.6	-	-	33%	-216%	-20%	-	-
2018	1,171	17.5	5.4	3.6	3.6	3.0	1.3	31%	25%	27%	31%	20%
2017	9,199	13.7	3.4	3.6	2.4	1.5	0.8	25%	30%	22%	19%	11%
2016	3,959	13.6	-0.2	2.1	1.3	-0.3	-0.7	-1%	16%	10%	-3%	-8%
2015	2,604	11.7	-1.7	1.8	-0.3	-1.0	-1.3	-14%	14%	-3%	-13%	-15%
2014	1,114	10.7	-2.9	0.7	-0.6	-1.9	-1.6	-27%	6%	-6%	-25%	-18%
2013	1,217	12.6	0.6	0.2	-0.2	-0.7	-1.3	5%	2%	-2%	-9%	-16%
2012	4,008	9.4	-1.5	-1.4	-1.4	-1.9	-2.0	-16%	-17%	-16%	-30%	-29%
2011	423	11.8	1.4	-0.2	-1.0	-0.8	-1.9	12%	-3%	-13%	-12%	-29%
2010	54	0.5	-9.3	3.6	-1.2	1.1	-1.2	-2060%	28%	-15%	12%	-16%
30yr Jumbo 4	11,557	25.3	9.9	10.8	9.2	6.2	2.8	39%	45%	42%	38%	22%
2019	425	10.9	3.3	4.5	3.1	-	-	30%	42%	35%	-	-
2018	3,731	38.9	20.3	21.8	19.7	14.3	8.1	52%	58%	58%	59%	52%
2017	2,694	25.7	10.5	10.7	9.3	6.2	4.3	41%	47%	43%	39%	32%
2016	448	16.5	0.4	0.4	-1.9	-0.6	-1.3	3%	3%	-15%	-6%	-12%
2015	162	25.6	9.8	8.7	5.9	1.5	0.0	38%	38%	30%	11%	0%
2014	415	10.6	-4.6	9.3	3.6	2.2	0.6	-44%	41%	21%	17%	5%
2013	551	11.3	-2.2	0.5	-0.9	-1.4	-2.5	-20%	4%	-8%	-16%	-28%
2012	302	13.6	1.2	-2.8	0.1	0.0	-2.5	8%	-32%	1%	0%	-30%
2011	1,450	10.9	-1.4	-3.8	-2.1	-1.6	-1.2	-13%	-56%	-24%	-22%	-14%
2010	1,350	13.8	1.8	1.6	0.4	0.8	-0.3	13%	13%	4%	9%	-4%
30yr Jumbo 4.5	2,548	29.4	12.1	9.3	11.1	8.1	5.4	41%	39%	44%	41%	33%
2019	66	41.6	34.6	5.5	14.2	-	-	83%	54%	73%	-	-
2018	982	40.8	19.9	22.9	22.1	18.0	12.3	49%	58%	58%	60%	59%
2017	135	38.2	24.1	1.6	11.9	6.9	6.7	63%	11%	47%	38%	35%
2011	390	17.3	3.8	6.1	4.2	0.6	-0.6	22%	35%	27%	6%	-5%
2010	621	19.5	6.3	-4.1	2.9	1.4	1.1	32%	-55%	20%	12%	9%
2009	292	15.0	2.2	-3.0	-0.6	-0.1	0.2	15%	-35%	-6%	-1%	1%

Source: Bloomberg

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# FNMA Prepayment Speed Comparison

## June 2019

### FNMA 105-125 LTV vs FNMA Generic

	HLTV Data		CPR Differences vs Generic					% CPR Differences vs Generic				
	Cur Bal (MM)	CPR (Jun)	Jun	May	3mo	6mo	12mo	Jun	May	3mo	6mo	12mo
<b>30yr 105-125 LTV 3</b>	<b>2,890</b>	<b>9.9</b>	<b>-0.1</b>	<b>0.2</b>	<b>0.2</b>	<b>0.7</b>	<b>1.6</b>	<b>-1%</b>	<b>2%</b>	<b>2%</b>	<b>9%</b>	<b>17%</b>
2016	163	10.5	0.0	-0.6	0.0	-0.8	-1.3	0%	-7%	0%	-13%	-22%
2015	52	10.1	-0.6	8.3	0.5	-0.4	-0.5	-6%	47%	5%	-5%	-6%
2013	1,675	10.4	0.3	-0.4	0.4	0.9	1.3	3%	-5%	5%	11%	15%
2012	987	8.8	-0.8	1.3	0.0	0.6	1.8	-9%	14%	0%	8%	20%
<b>30yr 105-125 LTV 3.5</b>	<b>12,444</b>	<b>12.6</b>	<b>1.0</b>	<b>1.2</b>	<b>1.1</b>	<b>1.4</b>	<b>2.1</b>	<b>8%</b>	<b>10%</b>	<b>10%</b>	<b>14%</b>	<b>20%</b>
2017	55	10.6	0.2	-6.4	-2.8	-1.4	-2.5	2%	-320%	-49%	-27%	-69%
2016	314	14.8	1.0	-3.9	-1.3	0.1	-1.6	7%	-52%	-12%	1%	-19%
2015	402	9.5	-3.8	-2.3	-2.2	-2.0	-1.9	-40%	-26%	-24%	-27%	-24%
2014	156	8.2	-5.4	-1.7	-3.2	-2.6	-1.2	-66%	-18%	-39%	-38%	-14%
2013	4,555	13.3	1.3	1.1	1.0	0.9	1.3	10%	10%	9%	9%	12%
2012	6,928	12.3	1.4	1.4	1.3	1.4	1.8	12%	13%	12%	15%	17%
<b>30yr 105-125 LTV 4</b>	<b>8,353</b>	<b>12.9</b>	<b>-2.5</b>	<b>0.9</b>	<b>-0.2</b>	<b>0.3</b>	<b>1.5</b>	<b>-19%</b>	<b>6%</b>	<b>-2%</b>	<b>3%</b>	<b>13%</b>
2018	41	0.2	-18.4	-15.3	-14.2	-9.8	-6.3	-8373%	-7650%	-6363%	-4588%	-578%
2017	256	5.6	-9.6	-4.8	-6.8	-4.3	-2.9	-173%	-64%	-118%	-77%	-46%
2016	188	15.3	-0.8	-3.4	-3.2	-2.4	-2.3	-5%	-32%	-29%	-26%	-24%
2015	521	13.2	-2.6	1.9	-0.9	-1.6	-2.0	-20%	12%	-6%	-15%	-18%
2014	826	9.9	-5.3	-1.7	-2.4	-2.1	-2.2	-53%	-14%	-23%	-23%	-23%
2013	1,887	13.7	0.2	3.4	1.4	1.0	0.4	1%	22%	11%	9%	4%
2012	4,155	13.7	1.2	3.2	1.9	0.9	1.3	9%	22%	14%	9%	11%
2011	377	11.9	-0.4	0.8	0.4	0.4	1.5	-4%	7%	4%	4%	13%
2010	101	9.4	-2.7	-2.5	-2.1	0.8	0.9	-28%	-31%	-25%	8%	8%
<b>30yr 105-125 LTV 4.5</b>	<b>3,186</b>	<b>16.2</b>	<b>-1.1</b>	<b>0.4</b>	<b>-0.1</b>	<b>0.5</b>	<b>1.9</b>	<b>-7%</b>	<b>3%</b>	<b>-1%</b>	<b>4%</b>	<b>14%</b>
2015	33	19.2	2.9	13.7	7.4	2.8	3.0	15%	50%	34%	18%	18%
2014	667	16.6	-0.2	-0.8	0.4	-0.4	-1.1	-1%	-6%	3%	-3%	-8%
2013	772	14.1	-1.3	0.1	-0.6	-0.2	-0.7	-9%	1%	-5%	-1%	-6%
2012	332	15.0	0.8	3.9	0.4	0.0	1.2	6%	23%	3%	0%	9%
2011	988	17.8	4.2	3.8	3.2	1.8	1.8	24%	25%	21%	15%	14%
2010	312	18.5	5.3	3.2	2.3	2.7	2.5	29%	21%	16%	21%	18%
<b>30yr 105-125 LTV 5</b>	<b>935</b>	<b>19.3</b>	<b>2.9</b>	<b>4.5</b>	<b>3.1</b>	<b>2.6</b>	<b>3.5</b>	<b>15%</b>	<b>24%</b>	<b>18%</b>	<b>18%</b>	<b>22%</b>
2013	46	17.9	-0.7	-7.8	-4.4	-3.9	-3.2	-4%	-93%	-40%	-42%	-28%
2011	538	18.2	2.3	4.6	3.6	1.9	1.9	13%	25%	21%	13%	13%
2010	274	21.7	6.8	6.5	5.4	4.2	4.2	31%	34%	29%	26%	24%
2009	48	24.1	9.8	8.4	5.6	2.3	3.3	41%	39%	31%	17%	21%
<b>30yr 105-125 LTV 5.5</b>	<b>62</b>	<b>24.7</b>	<b>11.0</b>	<b>6.4</b>	<b>16.3</b>	<b>9.5</b>	<b>7.6</b>	<b>44%</b>	<b>34%</b>	<b>57%</b>	<b>45%</b>	<b>37%</b>
2010	43	27.8	12.4	10.1	15.2	10.6	6.8	45%	39%	51%	45%	31%

Source: Bloomberg

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# FNMA Prepayment Speed Comparison

## June 2019

### FNMA 125+ LTV vs FNMA Generic

	HLTV Data		CPR Differences vs Generic					% CPR Differences vs Generic				
	Cur Bal (MM)	CPR (Jun)	Jun	May	3mo	6mo	12mo	Jun	May	3mo	6mo	12mo
<b>30yr 125+ LTV 3</b>	<b>2,400</b>	<b>10.8</b>	<b>0.8</b>	<b>0.3</b>	<b>1.0</b>	<b>1.5</b>	<b>1.9</b>	<b>7%</b>	<b>4%</b>	<b>10%</b>	<b>17%</b>	<b>20%</b>
2013	1,375	11.2	1.2	0.8	1.1	1.5	1.4	10%	9%	11%	18%	15%
2012	956	10.4	0.8	0.6	1.3	1.3	2.2	8%	7%	14%	16%	23%
<b>30yr 125+ LTV 3.5</b>	<b>12,984</b>	<b>13.2</b>	<b>1.6</b>	<b>1.3</b>	<b>1.5</b>	<b>1.7</b>	<b>2.5</b>	<b>12%</b>	<b>11%</b>	<b>13%</b>	<b>17%</b>	<b>23%</b>
2016	133	13.1	-0.7	-5.4	-5.1	-5.0	-4.4	-5%	-87%	-77%	-107%	-78%
2015	182	9.6	-3.7	-3.9	-3.3	-0.7	-0.6	-38%	-53%	-41%	-8%	-6%
2014	55	19.5	6.0	-8.5	-1.8	-1.3	-3.8	31%	-300%	-19%	-16%	-59%
2013	4,860	11.1	-0.9	0.6	0.4	0.7	1.0	-8%	5%	4%	7%	9%
2012	7,723	14.6	3.7	1.7	2.3	2.0	2.4	25%	15%	19%	19%	21%
<b>30yr 125+ LTV 4</b>	<b>7,329</b>	<b>14.2</b>	<b>-1.2</b>	<b>-0.6</b>	<b>-0.1</b>	<b>0.8</b>	<b>1.9</b>	<b>-8%</b>	<b>-5%</b>	<b>-1%</b>	<b>7%</b>	<b>16%</b>
2017	89	4.2	-11.0	-8.1	-6.9	-5.1	-3.6	-260%	-193%	-124%	-106%	-65%
2016	89	10.7	-5.5	-0.5	-4.8	-4.2	-5.1	-51%	-4%	-52%	-55%	-72%
2015	256	10.6	-5.2	-7.5	-5.3	-3.2	-2.7	-49%	-112%	-60%	-37%	-27%
2014	428	9.4	-5.8	-4.2	-4.9	-4.1	-3.0	-62%	-47%	-58%	-59%	-32%
2013	1,732	13.5	-0.1	2.0	0.8	0.7	0.3	0%	14%	6%	6%	3%
2012	4,719	15.3	2.8	1.4	2.1	1.6	1.7	18%	11%	16%	14%	14%
<b>30yr 125+ LTV 4.5</b>	<b>1,780</b>	<b>14.8</b>	<b>-2.5</b>	<b>-0.7</b>	<b>-1.0</b>	<b>-0.3</b>	<b>1.4</b>	<b>-17%</b>	<b>-5%</b>	<b>-7%</b>	<b>-2%</b>	<b>11%</b>
2014	496	12.1	-4.7	-2.8	-3.6	-3.7	-3.4	-39%	-22%	-32%	-40%	-32%
2013	812	14.0	-1.5	-1.7	-1.1	-0.7	-1.3	-10%	-15%	-9%	-6%	-11%
2012	431	19.5	5.3	6.6	4.1	1.8	2.9	27%	34%	24%	14%	19%
<b>30yr 125+ LTV 5</b>	<b>90</b>	<b>17.0</b>	<b>0.6</b>	<b>2.9</b>	<b>-1.1</b>	<b>-0.2</b>	<b>1.2</b>	<b>4%</b>	<b>17%</b>	<b>-8%</b>	<b>-2%</b>	<b>9%</b>
2014	44	12.0	-6.2	5.4	-1.9	-2.8	-0.9	-51%	28%	-15%	-27%	-7%
2013	46	21.7	3.1	-1.6	-1.8	-0.6	-0.6	14%	-11%	-13%	-5%	-5%

Source: Bloomberg

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# FNMA Prepayment Speed Comparison

June 2019

FNMA Relo vs FNMA Generic

	Relo Data		CPR Differences vs Generic					% CPR Differences vs Generic				
	Cur Bal (MM)	CPR (Jun)	Jun	May	3mo	6mo	12mo	Jun	May	3mo	6mo	12mo
15yr RELO 2	34	14.3	4.5	3.4	6.1	6.8	6.4	32%	27%	41%	48%	46%
2015	15	24.2	14.5	-5.3	2.7	4.8	6.6	60%	-197%	24%	40%	47%
15yr RELO 2.5	186	19.6	8.7	6.0	7.3	6.8	8.2	44%	38%	43%	45%	48%
2017	28	27.6	18.7	1.5	10.0	7.2	5.4	68%	16%	55%	52%	46%
2015	28	20.5	8.9	6.2	5.9	6.7	9.4	44%	38%	37%	45%	52%
2014	74	16.8	5.1	1.3	3.7	3.2	5.5	30%	9%	24%	25%	36%
30yr RELO 2.5	235	16.4	8.9	1.9	4.4	4.4	6.7	55%	21%	40%	45%	53%
2016	70	9.9	2.8	-0.4	2.7	5.8	6.6	28%	-6%	31%	54%	56%
2013	117	19.2	12.4	1.7	5.6	4.2	6.6	65%	17%	46%	43%	52%
2012	46	19.3	11.2	4.9	4.6	2.6	5.3	58%	39%	39%	31%	45%
30yr RELO 3	4,131	15.6	5.6	4.0	4.5	4.1	4.2	36%	32%	34%	37%	36%
2018	520	6.3	1.2	3.2	1.7	2.3	1.3	19%	47%	30%	42%	30%
2017	1,391	13.4	5.8	7.5	6.1	5.2	3.9	43%	56%	50%	51%	47%
2016	516	21.2	10.7	8.8	8.5	9.3	8.7	50%	50%	49%	57%	54%
2015	859	18.7	8.0	2.0	4.6	4.1	6.5	43%	17%	33%	36%	45%
2014	291	20.1	10.3	1.6	5.2	4.1	5.8	51%	15%	36%	36%	42%
2013	271	21.5	11.4	3.2	7.4	5.4	6.6	53%	28%	46%	43%	46%
2012	226	11.1	1.6	7.0	8.0	5.0	6.0	14%	47%	49%	42%	45%
2011	31	17.3	7.1	9.1	8.5	7.9	8.1	41%	59%	57%	56%	53%
30yr RELO 3.5	1,604	16.5	4.9	2.8	3.9	3.4	4.7	30%	22%	28%	29%	35%
2018	358	11.7	-0.4	-5.6	-3.1	-1.6	-0.3	-3%	-115%	-45%	-30%	-6%
2017	193	19.2	8.9	8.0	7.9	7.3	6.7	46%	49%	48%	52%	52%
2014	518	17.2	3.6	3.8	4.9	5.0	6.5	21%	25%	30%	34%	39%
2013	168	23.4	11.4	5.6	6.6	5.1	5.6	49%	34%	39%	36%	37%
2012	100	5.7	-5.2	-1.0	1.5	1.6	3.9	-90%	-11%	13%	16%	30%
2011	129	11.4	1.1	1.9	1.7	1.5	3.0	10%	17%	16%	16%	26%
2010	111	27.4	17.6	6.8	8.0	4.1	4.6	64%	42%	47%	34%	35%
30yr RELO 4	461	14.2	-1.1	0.9	0.7	0.6	4.0	-8%	7%	5%	6%	29%
2014	87	20.8	5.6	-3.4	1.0	-0.1	5.0	27%	-35%	7%	-1%	29%
2011	150	11.0	-1.3	2.4	3.2	2.6	4.4	-12%	18%	23%	22%	30%
2010	124	17.7	5.7	6.4	4.8	1.9	2.0	32%	38%	32%	17%	17%
30yr RELO 4.5	75	21.8	4.5	-3.0	-0.5	3.2	5.4	20%	-26%	-4%	22%	33%
2011	31	5.4	-8.2	1.2	-5.2	1.1	6.0	-152%	9%	-82%	9%	35%

Source: Bloomberg

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# FGLMC Prepayment Speed Comparison

June 2019

## FGLMC Jumbos vs FGLMC Generic

	Jumbo Data		CPR Differences vs Generic					% CPR Differences vs Generic				
	Cur Bal (MM)	CPR (Jun)	Jun	May	3mo	6mo	12mo	Jun	May	3mo	6mo	12mo
15yr Jumbo 2	30	17.8	6.1	-5.1	-1.6	-3.2	-1.3	34%	-108%	-19%	-61%	-18%
2013	19	25.5	13.6	-9.2	0.1	-2.6	-2.2	53%	-470%	1%	-38%	-34%
15yr Jumbo 2.5	382	8.2	-4.0	-5.2	-4.9	-4.1	-3.4	-48%	-102%	-89%	-85%	-62%
2017	11	2.2	-8.4	-9.6	-8.2	-7.0	-6.2	-387%	4178%	-1415%	-2009%	-805%
2016	30	1.4	-10.1	-7.9	-8.5	-6.3	-5.4	-703%	-485%	-724%	-340%	-198%
2015	59	23.2	11.4	-9.2	-1.3	-2.6	-1.0	49%	-1104%	-14%	-43%	-13%
2014	21	19.7	5.6	-7.8	-2.6	-4.5	-1.6	28%	-182%	-27%	-80%	-19%
2013	116	5.6	-7.3	-2.9	-5.2	-4.8	-5.3	-131%	-37%	-90%	-100%	-121%
2012	145	3.4	-9.7	-5.4	-6.9	-4.8	-4.2	-283%	-93%	-157%	-95%	-71%
15yr Jumbo 3	72	3.2	-10.2	0.1	-5.4	-2.6	-2.1	-317%	1%	-89%	-35%	-27%
2015	11	0.9	-12.6	-10.8	-9.7	-1.2	-2.5	-1418%	-3710%	-511%	-14%	-32%
2014	13	6.3	-8.0	-11.3	-9.4	-9.0	-6.4	-126%	-915%	-347%	-539%	-137%
2012	23	1.2	-12.9	17.6	0.1	2.0	2.0	-1041%	59%	1%	15%	15%
2011	16	6.4	6.4	2.1	4.7	5.5	6.3	100%	100%	100%	100%	100%
30yr Jumbo 2.5	1,031	5.7	-3.4	1.6	-1.1	-1.4	-1.8	-60%	20%	-20%	-32%	-44%
2013	106	8.2	2.4	-10.2	-4.3	-2.9	-2.5	29%	-2318%	-124%	-101%	-65%
2012	884	5.5	-3.1	3.7	-0.5	-1.2	-2.2	-57%	40%	-9%	-27%	-54%
30yr Jumbo 3	13,973	8.9	-1.4	-1.1	-1.3	-1.4	-1.9	-16%	-15%	-17%	-25%	-35%
2018	208	21.0	12.4	7.6	7.8	3.2	1.7	59%	58%	58%	46%	33%
2017	1,646	8.2	0.3	-1.8	0.6	-0.3	-0.1	3%	-36%	9%	-7%	-2%
2016	4,396	8.3	-2.7	-2.1	-2.1	-1.9	-2.1	-32%	-30%	-29%	-33%	-39%
2015	2,987	9.1	-1.6	-0.4	-1.0	-0.8	-1.6	-18%	-4%	-12%	-11%	-26%
2014	122	6.7	-4.0	-2.1	-4.2	-1.6	0.4	-59%	-43%	-104%	-30%	5%
2013	2,059	9.0	-1.5	-0.4	-1.2	-1.8	-1.9	-17%	-5%	-16%	-33%	-33%
2012	2,532	9.4	-0.4	-0.3	-0.9	-1.3	-2.2	-5%	-3%	-13%	-24%	-42%
30yr Jumbo 3.5	12,750	15.4	3.5	1.7	1.7	0.6	-0.1	23%	14%	15%	6%	-1%
2019	51	0.2	-5.9	-3.4	-3.8	-	-	-3669%	-1811%	-3321%	-	-
2018	503	21.2	9.1	-0.7	4.3	3.7	1.5	43%	-6%	31%	35%	22%
2017	3,897	17.8	7.3	3.5	3.9	2.2	1.4	41%	29%	32%	24%	18%
2016	2,554	15.8	2.2	2.7	1.3	0.1	-0.8	14%	19%	10%	1%	-9%
2015	2,107	17.0	3.3	-0.3	0.8	-0.2	-0.2	19%	-3%	6%	-2%	-2%
2014	891	14.7	1.6	2.3	1.1	0.2	-1.0	11%	17%	9%	3%	-11%
2013	687	11.6	-0.4	-5.1	-2.6	-2.1	-2.0	-4%	-101%	-34%	-31%	-28%
2012	1,840	8.6	-3.0	-0.2	-1.4	-1.4	-1.6	-35%	-2%	-16%	-20%	-22%
2011	215	13.4	2.4	8.6	3.4	-0.6	-2.2	18%	51%	27%	-8%	-36%
30yr Jumbo 4	6,374	24.7	8.5	7.5	7.2	5.4	2.7	34%	36%	35%	34%	21%
2019	102	0.2	-9.8	3.7	-3.5	-	-	-4248%	36%	-95%	-	-
2018	2,482	35.2	15.4	13.4	12.9	10.1	6.2	44%	45%	46%	49%	45%
2017	1,035	21.4	6.5	5.4	5.4	4.3	2.9	30%	30%	30%	31%	24%
2016	356	21.8	5.9	4.6	4.1	3.9	1.2	27%	24%	23%	25%	9%
2015	582	17.6	1.6	-2.2	1.1	2.4	1.3	9%	-20%	8%	17%	9%
2014	752	13.1	-2.2	0.2	0.6	-0.5	-1.1	-17%	1%	4%	-5%	-10%
2013	293	20.3	6.8	1.0	2.6	0.6	-1.3	34%	7%	18%	6%	-13%
2012	160	7.4	-5.3	0.9	-0.6	-0.7	-1.0	-72%	8%	-5%	-7%	-10%
2011	457	9.7	-2.8	3.7	0.2	-1.0	-1.5	-28%	27%	1%	-12%	-17%
2010	154	23.2	10.6	0.9	4.3	1.8	1.4	46%	8%	29%	17%	13%
30yr Jumbo 4.5	602	32.1	14.4	18.4	13.9	9.7	6.2	45%	56%	49%	45%	36%
2018	226	56.7	35.1	37.1	31.3	23.1	13.8	62%	69%	65%	65%	60%
2017	20	0.1	-17.8	-15.5	-15.7	2.9	9.2	-17770%	-51600%	-26878%	18%	43%
2015	42	0.4	-16.6	-15.1	-10.1	-7.8	-7.0	-4363%	-3028%	-184%	-153%	-100%
2014	68	16.0	-0.4	0.2	0.3	0.9	0.3	-2%	1%	2%	6%	2%

Source: Bloomberg

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# FGLMC Prepayment Speed Comparison

## June 2019

### FGLMC 125+ LTV vs FGLMC Generic

	HLTV Data		CPR Differences vs Generic					% CPR Differences vs Generic				
	Cur Bal (MM)	CPR (Jun)	Jun	May	3mo	6mo	12mo	Jun	May	3mo	6mo	12mo
<b>30yr 125+ LTV 3</b>	544	10.1	-0.3	3.0	1.6	2.2	3.2	-3%	26%	16%	24%	30%
2013	271	9.1	-1.4	0.1	0.6	1.5	2.7	-16%	1%	6%	17%	26%
2012	266	11.4	1.6	6.4	3.1	3.3	3.5	14%	45%	28%	32%	32%
<b>30yr 125+ LTV 3.5</b>	4,866	11.2	-0.7	1.4	0.4	0.9	1.8	-6%	12%	4%	10%	18%
2016	50	9.7	-4.0	-7.4	-6.9	-6.6	-5.6	-41%	-175%	-144%	-211%	-124%
2015	53	4.9	-8.8	-11.0	-6.7	-5.1	-3.8	-178%	-577%	-142%	-117%	-61%
2013	2,139	9.5	-2.5	1.4	-0.4	0.2	0.7	-26%	12%	-4%	2%	7%
2012	2,608	12.8	1.2	2.1	1.4	1.3	1.8	10%	18%	13%	14%	17%
<b>30yr 125+ LTV 4</b>	7,138	13.3	-2.9	-1.4	-1.2	-0.1	1.7	-22%	-11%	-10%	-1%	14%
2017	45	3.2	-11.7	-6.9	-7.5	-6.8	-4.5	-361%	-124%	-153%	-228%	-95%
2016	90	6.0	-9.9	-1.8	-6.3	-5.1	-5.2	-166%	-14%	-85%	-77%	-74%
2015	186	2.5	-13.6	-4.8	-7.5	-6.7	-6.5	-544%	-57%	-122%	-133%	-106%
2014	166	12.9	-2.5	2.9	-0.5	-1.6	-2.2	-19%	18%	-4%	-17%	-22%
2013	1,857	13.7	0.3	-1.4	-0.3	0.1	0.5	2%	-13%	-3%	1%	4%
2012	4,792	13.8	1.0	1.8	1.4	0.5	1.1	7%	14%	11%	5%	10%
<b>30yr 125+ LTV 4.5</b>	2,086	16.4	-1.4	-2.1	-0.5	0.2	1.3	-8%	-16%	-3%	2%	11%
2017	33	9.4	-8.5	-15.3	-8.4	-8.9	-9.1	-90%	-7286%	-116%	-232%	-284%
2016	11	6.6	-10.0	-15.4	4.0	-2.5	-8.5	-151%	-6400%	20%	-24%	-154%
2015	61	9.4	-7.5	-9.8	-1.3	2.2	-2.3	-80%	-170%	-9%	15%	-20%
2014	414	16.6	0.2	-4.1	-0.8	-2.3	-3.8	1%	-36%	-6%	-21%	-38%
2013	591	11.0	-3.4	-3.6	-2.2	-2.3	-1.7	-31%	-32%	-19%	-24%	-16%
2012	968	20.2	7.4	1.9	2.8	2.5	1.8	37%	12%	17%	18%	12%
<b>30yr 125+ LTV 5</b>	67	9.6	-7.3	3.3	-0.8	-1.0	2.3	-76%	19%	-6%	-8%	15%
2014	29	10.4	-12.5	11.3	-5.6	-1.1	-1.1	-120%	67%	-51%	-9%	-8%
2013	32	10.8	0.8	-3.5	3.5	-0.2	5.9	7%	-22%	21%	-1%	35%

Source: Bloomberg

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# FGLMC Prepayment Speed Comparison

## June 2019

### FGLMC Relo vs FGLMC Generic

	Relo Data		CPR Differences vs Generic					% CPR Differences vs Generic				
	Cur Bal (MM)	CPR (Jun)	Jun	May	3mo	6mo	12mo	Jun	May	3mo	6mo	12mo
30yr Relo 3	268	13.3	5.3	6.7	6.9	6.2	7.9	40%	49%	52%	55%	64%
2017	35	14.9	4.2	11.7	3.3	3.7	0.8	28%	56%	27%	33%	10%
2015	174	13.8	4.0	5.9	6.9	5.7	6.7	29%	42%	46%	45%	47%
2012	25	11.1	-0.8	6.8	2.6	-1.3	0.2	-7%	40%	21%	-19%	3%
30yr Relo 3.5	39	10.5	-2.6	-9.4	-1.2	2.5	5.8	-25%	-698%	-12%	21%	37%
2014	21	17.9	17.9	1.9	16.6	14.4	18.3	100%	100%	100%	100%	100%

#### Source: Bloomberg

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# GNMA Prepayment Speed Comparison

## June 2019

### GNMA2 Jumbo vs GNMA2 Generic

	Jumbo Data		CPR Differences vs Generic					% CPR Differences vs Generic				
	Cur Bal (MM)	CPR (Jun)	Jun	May	3mo	6mo	12mo	Jun	May	3mo	6mo	12mo
<b>GNMA 2 Jumbo 2.5</b>	347	5.6	-6.3	-2.8	-3.3	-3.1	-0.7	-113%	-33%	-44%	-53%	-8%
2017	30	1.2	-7.5	10.3	-1.1	-3.1	-2.6	-636%	66%	-18%	-91%	-75%
2016	177	7.7	-3.9	-4.5	-0.8	-1.5	0.2	-51%	-69%	-8%	-21%	2%
2015	25	0.6	-11.5	-11.2	-11.6	-9.1	-3.3	-1882%	-1158%	-1592%	-884%	-52%
2013	39	0.7	-12.9	-10.6	-10.7	-8.9	-2.9	-1762%	-364%	-807%	-989%	-38%
2012	71	0.6	-11.5	3.4	-4.9	-2.3	-0.9	-1824%	22%	-76%	-34%	-9%
<b>GNMA 2 Jumbo 3</b>	20,726	15.8	0.8	0.3	0.4	-0.6	-1.0	5%	2%	3%	-6%	-9%
2019	160	0.4	-0.2	22.5	8.1	-	-	-37%	100%	97%	-	-
2018	348	3.5	-1.0	0.3	-0.4	-0.6	-0.3	-28%	14%	-21%	-24%	-9%
2017	2,660	13.1	0.4	2.9	0.6	-0.1	-0.6	3%	21%	5%	-1%	-8%
2016	12,527	17.5	1.3	-0.2	0.5	-0.4	-0.5	7%	-2%	4%	-4%	-5%
2015	2,560	18.0	1.5	-0.4	0.6	-0.6	-0.9	8%	-3%	4%	-6%	-7%
2014	308	12.8	-2.8	-3.0	-3.0	-3.8	-5.0	-22%	-28%	-27%	-47%	-64%
2013	1,104	9.9	-3.9	1.0	-0.1	-1.1	-1.8	-39%	8%	-1%	-12%	-18%
2012	1,049	9.5	0.2	-1.7	0.6	0.5	-2.0	2%	-15%	7%	7%	-23%
<b>GNMA 2 Jumbo 3.5</b>	23,156	19.9	4.6	4.7	3.2	1.4	0.4	23%	26%	19%	11%	3%
2019	785	1.1	0.0	-0.9	-0.3	-	-	0%	-484%	-73%	-	-
2018	2,810	22.0	8.0	7.9	6.1	2.3	0.8	36%	42%	36%	20%	11%
2017	8,753	19.0	4.3	5.7	3.7	2.4	2.0	22%	32%	23%	20%	19%
2016	3,722	24.3	7.5	4.2	3.7	1.7	1.1	31%	22%	20%	12%	8%
2015	4,027	22.6	4.3	6.4	4.1	2.0	1.0	19%	30%	21%	13%	7%
2014	1,019	14.2	-2.8	-0.5	-1.3	-1.4	-2.2	-20%	-3%	-10%	-13%	-19%
2013	546	17.1	3.0	5.1	2.4	0.0	-1.2	17%	29%	16%	0%	-11%
2012	1,348	16.0	1.2	-4.1	-1.7	-1.6	-2.1	8%	-56%	-16%	-18%	-21%
2011	137	14.7	-1.0	-7.5	-3.5	-2.6	-3.9	-7%	-202%	-44%	-36%	-55%
<b>GNMA 2 Jumbo 4</b>	9,375	37.3	19.0	15.5	15.1	9.3	4.8	51%	50%	50%	43%	29%
2019	855	2.8	1.1	0.6	1.1	-	-	41%	33%	46%	-	-
2018	4,591	49.5	26.1	21.8	21.1	13.9	7.8	53%	55%	55%	54%	52%
2017	2,266	32.4	12.7	11.2	11.7	8.6	7.1	39%	40%	42%	40%	38%
2016	359	17.4	-2.3	3.5	1.0	2.2	2.7	-13%	17%	6%	13%	16%
2015	444	15.9	-2.5	5.8	3.7	2.7	2.2	-16%	26%	19%	16%	13%
2014	236	19.1	2.5	-4.9	1.0	-0.7	0.9	13%	-48%	6%	-6%	6%
2013	77	12.5	-4.0	2.2	-4.7	1.9	0.5	-32%	13%	-46%	12%	3%
2012	94	10.7	-3.1	1.7	0.6	-0.2	-0.7	-29%	12%	4%	-2%	-6%
2011	161	21.4	6.3	-3.0	5.6	2.3	-0.3	29%	-33%	30%	17%	-2%
2010	277	16.8	2.5	-8.0	-2.3	-1.6	-1.4	15%	-195%	-23%	-17%	-14%
<b>GNMA 2 Jumbo 4.5</b>	2,411	46.0	24.6	18.1	18.8	11.1	7.1	53%	51%	51%	45%	37%
2019	210	3.0	3.0	0.1	1.2	-	-	100%	100%	100%	-	-
2018	1,767	52.9	27.6	21.1	22.2	13.8	8.1	52%	52%	53%	51%	51%
2017	116	51.6	23.8	21.6	17.7	11.1	15.9	46%	45%	41%	34%	47%
2016	31	52.9	28.2	8.1	9.1	11.7	10.2	53%	28%	30%	40%	38%
2015	11	0.3	-13.9	-12.5	13.9	10.5	2.0	-5556%	-3569%	52%	47%	13%
2014	37	0.1	-17.5	-15.1	-11.6	-3.3	0.5	-13431%	-25233%	-273%	-30%	3%
2013	17	22.3	3.4	-16.6	2.0	-1.1	-4.0	15%	-18489%	12%	-8%	-37%
2011	79	12.2	-3.2	1.2	3.8	0.9	0.5	-26%	8%	22%	7%	4%

Source: Bloomberg

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