

FNMA Prepayment Speed Comparison  
 November 2017  
 FNMA Jumbos vs FNMA Generic

|                | Jumbo Data   |           | CPR Differences vs Generic |       |      |      |      | % CPR Differences vs Generic |        |       |       |      |
|----------------|--------------|-----------|----------------------------|-------|------|------|------|------------------------------|--------|-------|-------|------|
|                | Cur Bal (MM) | CPR (Nov) | Nov                        | Oct   | 3mo  | 6mo  | 12mo | Nov                          | Oct    | 3mo   | 6mo   | 12mo |
| 15yr Jumbo 2   | 98           | 5.4       | -1.5                       | -4.1  | -2.3 | -2.4 | 0.8  | -28%                         | -118%  | -49%  | -46%  | 10%  |
| 2013           | 74           | 0.7       | -7.3                       | -3.9  | -4.1 | -4.4 | -0.2 | -1123%                       | -90%   | -100% | -101% | -2%  |
| 15yr Jumbo 2.5 | 1,944        | 6.1       | -2.0                       | -1.9  | -1.4 | -1.7 | -1.6 | -34%                         | -27%   | -20%  | -24%  | -24% |
| 2017           | 53           | 0.5       | -3.7                       | -3.2  | -3.9 | -3.8 | -    | -791%                        | -1538% | -895% | -716% | -    |
| 2016           | 733          | 5.5       | -1.0                       | -0.9  | -0.8 | -1.2 | -1.5 | -19%                         | -16%   | -14%  | -22%  | -36% |
| 2015           | 301          | 4.9       | -3.4                       | 1.1   | -1.6 | -1.5 | -1.6 | -69%                         | 10%    | -20%  | -19%  | -22% |
| 2014           | 45           | 2.1       | -8.3                       | -1.9  | 6.3  | -0.2 | -2.3 | -403%                        | -20%   | 36%   | -2%   | -27% |
| 2013           | 480          | 8.0       | -0.9                       | -1.8  | -0.9 | -0.7 | -0.8 | -11%                         | -23%   | -11%  | -7%   | -10% |
| 2012           | 333          | 6.8       | -2.7                       | -5.7  | -3.2 | -3.2 | -1.6 | -40%                         | -126%  | -49%  | -44%  | -19% |
| 15yr Jumbo 3   | 452          | 7.0       | -2.8                       | 5.1   | 2.2  | 0.4  | 0.6  | -40%                         | 31%    | 17%   | 3%    | 6%   |
| 2017           | 75           | 0.6       | -5.4                       | 18.2  | 9.1  | 3.8  | -    | -887%                        | 70%    | 57%   | 36%   | -    |
| 2014           | 28           | 1.4       | -10.3                      | 15.3  | -1.0 | 0.9  | 2.2  | -740%                        | 55%    | -9%   | 7%    | 15%  |
| 2012           | 103          | 13.6      | 2.5                        | 10.1  | 5.5  | 0.4  | 1.6  | 18%                          | 45%    | 32%   | 3%    | 12%  |
| 2011           | 204          | 7.8       | -3.7                       | -6.0  | -1.9 | -1.5 | -2.1 | -39%                         | -93%   | -20%  | -15%  | -21% |
| 15yr Jumbo 3.5 | 181          | 15.6      | 4.1                        | -6.1  | 1.6  | 1.9  | 2.4  | 26%                          | -93%   | 12%   | 13%   | 16%  |
| 2011           | 121          | 14.2      | 2.1                        | -4.8  | -0.2 | -0.8 | 0.7  | 15%                          | -57%   | -2%   | -6%   | 5%   |
| 2010           | 42           | 10.0      | -2.4                       | -11.0 | 0.2  | 2.8  | 0.8  | -24%                         | -445%  | 1%    | 17%   | 6%   |
| 30yr Jumbo 2.5 | 358          | 3.9       | -0.8                       | -4.1  | -3.0 | -1.9 | -1.6 | -21%                         | -194%  | -134% | -43%  | -42% |
| 2016           | 184          | 3.4       | 0.4                        | -2.8  | -1.6 | -0.1 | -0.1 | 12%                          | -434%  | -103% | -2%   | -4%  |
| 2012           | 164          | 3.9       | -1.6                       | -3.5  | -3.5 | -2.7 | -1.9 | -41%                         | -92%   | -119% | -54%  | -38% |
| 30yr Jumbo 3   | 31,076       | 6.7       | -0.6                       | 0.1   | -0.5 | -0.6 | -0.6 | -9%                          | 2%     | -7%   | -8%   | -10% |
| 2017           | 1,073        | 4.2       | 1.4                        | 1.9   | 1.2  | -0.5 | -    | 33%                          | 44%    | 32%   | -19%  | -    |
| 2016           | 13,823       | 5.4       | -0.6                       | 0.7   | -0.1 | -0.2 | -0.3 | -12%                         | 9%     | -1%   | -4%   | -7%  |
| 2015           | 2,923        | 8.0       | -0.4                       | -1.0  | -0.6 | -0.6 | -0.9 | -5%                          | -12%   | -7%   | -7%   | -11% |
| 2014           | 548          | 5.8       | -4.9                       | 1.1   | -1.5 | -1.9 | -1.8 | -84%                         | 9%     | -18%  | -23%  | -22% |
| 2013           | 6,301        | 8.4       | -0.3                       | 0.5   | 0.1  | -0.4 | -0.4 | -3%                          | 5%     | 1%    | -5%   | -5%  |
| 2012           | 6,405        | 7.7       | -0.4                       | -0.5  | -1.4 | -1.1 | -0.9 | -6%                          | -6%    | -20%  | -13%  | -11% |
| 30yr Jumbo 3.5 | 24,068       | 11.5      | 1.4                        | 5.2   | 2.9  | 1.8  | 1.6  | 12%                          | 31%    | 21%   | 14%   | 13%  |
| 2017           | 8,468        | 5.2       | 0.6                        | 8.0   | 4.5  | 2.9  | -    | 12%                          | 57%    | 46%   | 38%   | -    |
| 2016           | 4,680        | 17.3      | 7.2                        | 9.2   | 8.1  | 6.8  | 5.2  | 41%                          | 45%    | 43%   | 40%   | 39%  |
| 2015           | 2,961        | 16.3      | 4.1                        | 6.7   | 4.2  | 3.4  | 3.1  | 25%                          | 32%    | 25%   | 21%   | 22%  |
| 2014           | 1,280        | 15.2      | 2.0                        | 4.8   | 3.3  | 1.2  | 1.0  | 13%                          | 24%    | 19%   | 7%    | 7%   |
| 2013           | 1,439        | 16.3      | 4.8                        | 3.2   | 1.4  | 0.6  | 0.7  | 30%                          | 21%    | 11%   | 5%    | 5%   |
| 2012           | 4,691        | 11.2      | 0.4                        | 2.7   | 0.9  | -0.1 | 0.2  | 4%                           | 19%    | 7%    | -1%   | 2%   |
| 2011           | 486          | 10.5      | 0.1                        | 2.7   | 1.1  | 2.0  | 2.9  | 1%                           | 19%    | 10%   | 15%   | 20%  |
| 2010           | 62           | 0.7       | -10.6                      | 11.2  | -1.7 | -5.0 | -1.9 | -1605%                       | 50%    | -18%  | -73%  | -19% |
| 30yr Jumbo 4   | 8,238        | 20.2      | 6.8                        | 10.6  | 8.0  | 6.7  | 6.1  | 34%                          | 42%    | 37%   | 32%   | 30%  |
| 2017           | 2,494        | 22.6      | 13.9                       | 20.7  | 18.4 | 15.4 | -    | 61%                          | 67%    | 68%   | 68%   | -    |
| 2016           | 555          | 21.7      | 7.8                        | 16.6  | 12.6 | 15.8 | 16.2 | 36%                          | 51%    | 46%   | 53%   | 59%  |
| 2015           | 212          | 28.6      | 11.4                       | -1.7  | 5.8  | 6.5  | 8.4  | 40%                          | -10%   | 25%   | 27%   | 35%  |
| 2014           | 508          | 24.2      | 7.5                        | 5.0   | 5.6  | 5.5  | 6.6  | 31%                          | 22%    | 24%   | 24%   | 28%  |
| 2013           | 664          | 21.2      | 5.8                        | 12.2  | 6.8  | 4.8  | 4.3  | 27%                          | 42%    | 30%   | 23%   | 21%  |
| 2012           | 348          | 12.7      | -1.5                       | 10.6  | 2.8  | 3.4  | 4.3  | -12%                         | 43%    | 17%   | 19%   | 23%  |
| 2011           | 1,752        | 16.9      | 3.7                        | 7.5   | 3.9  | 2.8  | 3.7  | 22%                          | 34%    | 22%   | 17%   | 20%  |
| 2010           | 1,669        | 18.5      | 5.2                        | 5.5   | 4.3  | 3.1  | 3.9  | 28%                          | 28%    | 24%   | 18%   | 21%  |
| 2009           | 35           | 16.5      | 2.2                        | -13.9 | -7.5 | 0.8  | 0.8  | 14%                          | -2145% | -109% | 5%    | 5%   |
| 30yr Jumbo 4.5 | 1,958        | 22.7      | 7.3                        | 5.9   | 5.4  | 6.6  | 6.3  | 32%                          | 26%    | 25%   | 29%   | 27%  |
| 2017           | 184          | 39.7      | 27.2                       | 26.5  | 25.2 | 21.6 | -    | 69%                          | 67%    | 68%   | 69%   | -    |
| 2013           | 25           | 39.1      | 22.0                       | -18.1 | -2.4 | -3.4 | 9.2  | 56%                          | -5829% | -16%  | -23%  | 34%  |
| 2011           | 491          | 25.8      | 10.5                       | -7.2  | 4.4  | 8.0  | 7.9  | 41%                          | -8%    | 22%   | 33%   | 32%  |
| 2010           | 809          | 15.7      | -0.3                       | 7.0   | 2.5  | 4.1  | 4.1  | -2%                          | 30%    | 14%   | 20%   | 19%  |
| 2009           | 378          | 21.7      | 6.0                        | 5.8   | 3.8  | 3.9  | 4.9  | 28%                          | 25%    | 19%   | 19%   | 22%  |
| 30yr Jumbo 5   | 568          | 21.2      | 4.0                        | 3.2   | 4.1  | 5.6  | 5.4  | 19%                          | 15%    | 19%   | 24%   | 22%  |
| 2011           | 53           | 21.0      | 2.4                        | 11.1  | 12.0 | 7.7  | 8.1  | 12%                          | 37%    | 39%   | 29%   | 30%  |
| 2010           | 187          | 19.5      | 1.4                        | 0.8   | 0.5  | 5.0  | 3.1  | 7%                           | 4%     | 3%    | 21%   | 13%  |
| 2009           | 235          | 20.5      | 4.4                        | 0.7   | 4.8  | 4.5  | 4.5  | 22%                          | 4%     | 21%   | 20%   | 19%  |

Source: Bloomberg

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# FNMA Prepayment Speed Comparison

## November 2017

### FNMA 105-125 LTV vs FNMA Generic

|                             | HLTV Data     |             | CPR Differences vs Generic |             |             |            |             | % CPR Differences vs Generic |            |            |            |            |
|-----------------------------|---------------|-------------|----------------------------|-------------|-------------|------------|-------------|------------------------------|------------|------------|------------|------------|
|                             | Cur Bal (MM)  | CPR (Nov)   | Nov                        | Oct         | 3mo         | 6mo        | 12mo        | Nov                          | Oct        | 3mo        | 6mo        | 12mo       |
| <b>30yr 105-125 LTV 3</b>   | <b>3,495</b>  | <b>9.9</b>  | <b>2.6</b>                 | <b>0.8</b>  | <b>2.0</b>  | <b>2.3</b> | <b>2.4</b>  | <b>26%</b>                   | <b>8%</b>  | <b>21%</b> | <b>22%</b> | <b>25%</b> |
| 2016                        | 184           | 4.7         | -1.3                       | -3.7        | -1.6        | -1.8       | -1.0        | -28%                         | -119%      | -35%       | -41%       | -27%       |
| 2015                        | 59            | 7.3         | -1.0                       | -3.5        | -4.4        | -4.6       | -4.7        | -14%                         | -66%       | -100%      | -98%       | -131%      |
| 2013                        | 2,022         | 11.6        | 3.0                        | -0.3        | 1.4         | 0.9        | 0.7         | 26%                          | -3%        | 13%        | 8%         | 7%         |
| 2012                        | 1,218         | 7.7         | -0.5                       | 0.4         | 0.9         | 1.5        | 1.4         | -6%                          | 4%         | 10%        | 14%        | 14%        |
| <b>30yr 105-125 LTV 3.5</b> | <b>15,365</b> | <b>11.4</b> | <b>1.4</b>                 | <b>1.9</b>  | <b>1.6</b>  | <b>1.9</b> | <b>1.2</b>  | <b>12%</b>                   | <b>14%</b> | <b>13%</b> | <b>14%</b> | <b>10%</b> |
| 2017                        | 50            | 0.2         | -4.4                       | -5.8        | -5.1        | -4.5       | -           | -2756%                       | -2632%     | -2845%     | -2490%     | -          |
| 2016                        | 365           | 5.2         | -5.0                       | -5.8        | -3.9        | -4.2       | -3.3        | -96%                         | -103%      | -58%       | -70%       | -70%       |
| 2015                        | 473           | 7.7         | -4.5                       | -4.5        | -4.5        | -6.0       | -5.5        | -59%                         | -47%       | -64%       | -87%       | -92%       |
| 2014                        | 192           | 14.4        | 1.2                        | -3.4        | -2.4        | -4.3       | -5.5        | 8%                           | -28%       | -20%       | -42%       | -64%       |
| 2013                        | 5,629         | 10.8        | -0.7                       | -0.5        | -0.2        | 0.0        | -0.7        | -6%                          | -4%        | -2%        | 0%         | -6%        |
| 2012                        | 8,616         | 12.3        | 1.6                        | 3.3         | 2.1         | 2.2        | 1.2         | 13%                          | 22%        | 16%        | 15%        | 10%        |
| 2011                        | 34            | 11.4        | 0.9                        | 4.2         | 4.9         | 6.0        | 2.0         | 8%                           | 27%        | 32%        | 34%        | 15%        |
| <b>30yr 105-125 LTV 4</b>   | <b>10,386</b> | <b>13.4</b> | <b>0.0</b>                 | <b>0.2</b>  | <b>0.0</b>  | <b>0.5</b> | <b>-0.7</b> | <b>0%</b>                    | <b>1%</b>  | <b>0%</b>  | <b>3%</b>  | <b>-5%</b> |
| 2017                        | 251           | 1.3         | -7.4                       | -10.0       | -8.2        | -5.8       | -           | -584%                        | -7157%     | -1556%     | -394%      | -          |
| 2016                        | 225           | 5.2         | -8.7                       | -8.4        | -8.5        | -7.9       | -5.8        | -168%                        | -112%      | -140%      | -137%      | -110%      |
| 2015                        | 632           | 10.4        | -6.8                       | -12.1       | -10.0       | -9.0       | -7.7        | -66%                         | -180%      | -128%      | -106%      | -98%       |
| 2014                        | 1,011         | 10.9        | -5.9                       | -4.9        | -5.4        | -5.7       | -7.2        | -54%                         | -37%       | -45%       | -47%       | -70%       |
| 2013                        | 2,363         | 12.6        | -2.9                       | -2.5        | -2.8        | -2.6       | -4.0        | -23%                         | -17%       | -21%       | -19%       | -33%       |
| 2012                        | 5,287         | 15.1        | 0.9                        | 2.7         | 1.6         | 2.0        | 1.2         | 6%                           | 16%        | 10%        | 12%        | 8%         |
| 2011                        | 486           | 17.1        | 3.9                        | 5.9         | 4.3         | 3.5        | 1.9         | 23%                          | 29%        | 23%        | 20%        | 12%        |
| 2010                        | 129           | 17.2        | 3.9                        | 8.1         | 6.4         | 4.8        | 3.3         | 23%                          | 37%        | 32%        | 26%        | 19%        |
| <b>30yr 105-125 LTV 4.5</b> | <b>4,072</b>  | <b>15.0</b> | <b>-0.5</b>                | <b>-1.1</b> | <b>-0.2</b> | <b>1.3</b> | <b>0.0</b>  | <b>-3%</b>                   | <b>-7%</b> | <b>-1%</b> | <b>7%</b>  | <b>0%</b>  |
| 2017                        | 26            | 0.1         | -12.4                      | -11.8       | -11.4       | -9.5       | -           | -10300%                      | -886%      | -2112%     | -2624%     | -          |
| 2015                        | 40            | 12.8        | -4.3                       | -15.6       | -7.8        | -8.6       | -9.6        | -34%                         | -423%      | -78%       | -97%       | -145%      |
| 2014                        | 852           | 14.2        | -2.7                       | -9.2        | -5.5        | -4.7       | -6.7        | -19%                         | -88%       | -44%       | -34%       | -55%       |
| 2013                        | 981           | 12.3        | -4.7                       | -5.8        | -4.1        | -3.2       | -3.7        | -38%                         | -46%       | -30%       | -22%       | -26%       |
| 2012                        | 427           | 14.2        | -1.1                       | -1.6        | -1.5        | 1.5        | 0.9         | -8%                          | -11%       | -11%       | 9%         | 6%         |
| 2011                        | 1,301         | 16.0        | 0.6                        | 3.0         | 2.0         | 3.0        | 2.5         | 4%                           | 15%        | 11%        | 15%        | 13%        |
| 2010                        | 415           | 20.4        | 4.4                        | 7.7         | 6.9         | 9.0        | 6.4         | 22%                          | 32%        | 30%        | 35%        | 27%        |
| <b>30yr 105-125 LTV 5</b>   | <b>1,272</b>  | <b>22.1</b> | <b>4.9</b>                 | <b>0.5</b>  | <b>4.8</b>  | <b>5.7</b> | <b>4.6</b>  | <b>22%</b>                   | <b>3%</b>  | <b>21%</b> | <b>24%</b> | <b>20%</b> |
| 2014                        | 32            | 16.0        | -3.7                       | -11.1       | -11.6       | -4.4       | -8.5        | -23%                         | -113%      | -120%      | -27%       | -71%       |
| 2013                        | 57            | 13.4        | -6.7                       | -11.8       | -2.2        | -3.6       | -5.1        | -50%                         | -136%      | -13%       | -22%       | -35%       |
| 2011                        | 732           | 21.4        | 2.8                        | -1.2        | 3.4         | 4.6        | 4.0         | 13%                          | -7%        | 15%        | 20%        | 17%        |
| 2010                        | 378           | 25.8        | 7.7                        | 0.6         | 5.9         | 7.0        | 6.1         | 30%                          | 3%         | 24%        | 27%        | 24%        |
| 2009                        | 67            | 16.1        | 0.0                        | 15.6        | 6.7         | 3.7        | 6.1         | 0%                           | 46%        | 28%        | 17%        | 24%        |
| <b>30yr 105-125 LTV 5.5</b> | <b>91</b>     | <b>8.4</b>  | <b>-9.7</b>                | <b>8.6</b>  | <b>0.9</b>  | <b>5.6</b> | <b>7.2</b>  | <b>-115%</b>                 | <b>29%</b> | <b>4%</b>  | <b>23%</b> | <b>27%</b> |
| 2010                        | 63            | 9.3         | -8.8                       | 2.3         | -0.8        | 5.6        | 8.0         | -94%                         | 10%        | -5%        | 23%        | 29%        |

Source: Bloomberg

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# FNMA Prepayment Speed Comparison

## November 2017

### FNMA 125+ LTV vs FNMA Generic

|                          | HLTV Data     |             | CPR Differences vs Generic |             |             |             |             | % CPR Differences vs Generic |             |             |             |             |
|--------------------------|---------------|-------------|----------------------------|-------------|-------------|-------------|-------------|------------------------------|-------------|-------------|-------------|-------------|
|                          | Cur Bal (MM)  | CPR (Nov)   | Nov                        | Oct         | 3mo         | 6mo         | 12mo        | Nov                          | Oct         | 3mo         | 6mo         | 12mo        |
| <b>30yr 125+ LTV 3</b>   | <b>2,920</b>  | <b>9.8</b>  | <b>2.5</b>                 | <b>1.3</b>  | <b>2.0</b>  | <b>2.1</b>  | <b>1.5</b>  | <b>25%</b>                   | <b>14%</b>  | <b>20%</b>  | <b>21%</b>  | <b>18%</b>  |
| 2013                     | 1,666         | 9.1         | 0.5                        | 1.0         | 0.8         | 0.1         | -1.0        | 5%                           | 10%         | 8%          | 1%          | -12%        |
| 2012                     | 1,177         | 11.1        | 2.9                        | -0.8        | 1.2         | 1.5         | 1.1         | 26%                          | -10%        | 12%         | 14%         | 11%         |
| <b>30yr 125+ LTV 3.5</b> | <b>16,089</b> | <b>11.4</b> | <b>1.3</b>                 | <b>0.9</b>  | <b>0.9</b>  | <b>0.9</b>  | <b>0.0</b>  | <b>12%</b>                   | <b>7%</b>   | <b>7%</b>   | <b>8%</b>   | <b>0%</b>   |
| 2017                     | 23            | 0.2         | -4.4                       | -5.8        | -5.0        | -4.5        | -           | -2185%                       | -3063%      | -2406%      | -1783%      | -           |
| 2016                     | 153           | 4.2         | -5.9                       | -5.3        | -4.9        | -6.0        | -5.2        | -139%                        | -87%        | -87%        | -145%       | -182%       |
| 2015                     | 219           | 3.1         | -9.1                       | -10.3       | -9.1        | -8.3        | -7.2        | -291%                        | -278%       | -237%       | -183%       | -167%       |
| 2014                     | 65            | 10.0        | -3.2                       | -7.0        | -6.9        | -8.7        | -8.2        | -32%                         | -85%        | -95%        | -149%       | -134%       |
| 2013                     | 5,971         | 10.8        | -0.7                       | -0.6        | -1.0        | -1.3        | -2.2        | -7%                          | -5%         | -9%         | -11%        | -23%        |
| 2012                     | 9,659         | 12.2        | 1.4                        | 1.4         | 1.2         | 1.1         | -0.1        | 12%                          | 11%         | 10%         | 8%          | -1%         |
| <b>30yr 125+ LTV 4</b>   | <b>9,188</b>  | <b>12.7</b> | <b>-0.7</b>                | <b>-1.7</b> | <b>-1.3</b> | <b>-1.1</b> | <b>-2.1</b> | <b>-6%</b>                   | <b>-13%</b> | <b>-10%</b> | <b>-8%</b>  | <b>-18%</b> |
| 2017                     | 85            | 7.3         | -1.4                       | -10.0       | -6.1        | -5.7        | -           | -19%                         | -5876%      | -233%       | -361%       | -           |
| 2016                     | 102           | 4.5         | -9.4                       | -5.6        | -5.5        | -6.7        | -6.3        | -208%                        | -54%        | -60%        | -94%        | -131%       |
| 2015                     | 306           | 7.4         | -9.8                       | -7.4        | -10.1       | -10.3       | -9.7        | -133%                        | -64%        | -132%       | -145%       | -163%       |
| 2014                     | 516           | 10.0        | -6.8                       | -9.0        | -8.2        | -8.8        | -9.2        | -68%                         | -98%        | -90%        | -100%       | -111%       |
| 2013                     | 2,160         | 9.3         | -6.1                       | -5.2        | -5.3        | -5.3        | -6.3        | -65%                         | -45%        | -50%        | -49%        | -64%        |
| 2012                     | 6,019         | 14.6        | 0.4                        | 0.3         | 0.1         | 0.0         | -0.6        | 3%                           | 2%          | 1%          | 0%          | -5%         |
| <b>30yr 125+ LTV 4.5</b> | <b>2,236</b>  | <b>11.4</b> | <b>-4.1</b>                | <b>-4.1</b> | <b>-3.4</b> | <b>-3.6</b> | <b>-5.3</b> | <b>-36%</b>                  | <b>-32%</b> | <b>-27%</b> | <b>-29%</b> | <b>-46%</b> |
| 2017                     | 12            | 7.4         | -5.1                       | -13.0       | -9.4        | -8.5        | -           | -70%                         | -8640%      | -362%       | -593%       | -           |
| 2015                     | 27            | 7.7         | -9.4                       | -16.5       | -8.8        | -9.8        | -8.2        | -122%                        | -588%       | -99%        | -128%       | -101%       |
| 2014                     | 606           | 6.9         | -10.0                      | -10.4       | -8.1        | -8.8        | -9.7        | -145%                        | -112%       | -81%        | -89%        | -107%       |
| 2013                     | 1,014         | 10.9        | -6.1                       | -6.0        | -6.3        | -6.2        | -7.8        | -56%                         | -49%        | -54%        | -52%        | -74%        |
| 2012                     | 572           | 17.1        | 1.7                        | 2.0         | 2.2         | 1.5         | -0.1        | 10%                          | 11%         | 13%         | 9%          | 0%          |
| <b>30yr 125+ LTV 5</b>   | <b>114</b>    | <b>7.1</b>  | <b>-10.1</b>               | <b>-3.7</b> | <b>-6.2</b> | <b>-5.7</b> | <b>-7.4</b> | <b>-141%</b>                 | <b>-25%</b> | <b>-55%</b> | <b>-46%</b> | <b>-64%</b> |
| 2014                     | 55            | 0.3         | -19.4                      | -4.7        | -11.1       | -8.7        | -9.5        | -6063%                       | -29%        | -110%       | -72%        | -87%        |
| 2013                     | 58            | 13.2        | -6.9                       | -7.5        | -6.7        | -7.3        | -7.8        | -52%                         | -57%        | -53%        | -58%        | -65%        |

Source: Bloomberg

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# FNMA Prepayment Speed Comparison

## November 2017

### FNMA Relo vs FNMA Generic

|               | Relo Data    |           | CPR Differences vs Generic |       |      |      |      | % CPR Differences vs Generic |        |       |      |      |
|---------------|--------------|-----------|----------------------------|-------|------|------|------|------------------------------|--------|-------|------|------|
|               | Cur Bal (MM) | CPR (Nov) | Nov                        | Oct   | 3mo  | 6mo  | 12mo | Nov                          | Oct    | 3mo   | 6mo  | 12mo |
| 15yr RELO 2   | 48           | 16.0      | 9.1                        | 0.2   | 1.9  | 6.2  | 6.3  | 57%                          | 2%     | 21%   | 45%  | 48%  |
| 2015          | 21           | 12.7      | 4.4                        | -4.6  | -2.0 | 8.5  | 7.6  | 35%                          | -197%  | -35%  | 51%  | 50%  |
| 15yr RELO 2.5 | 257          | 12.9      | 4.9                        | 3.1   | 3.4  | 5.7  | 4.8  | 38%                          | 26%    | 28%   | 39%  | 37%  |
| 2017          | 30           | 20.7      | 16.6                       | 10.1  | 10.1 | 6.4  | -    | 80%                          | 75%    | 70%   | 60%  | -    |
| 2015          | 42           | 14.8      | 6.5                        | 11.3  | 5.4  | 9.6  | 4.4  | 44%                          | 53%    | 37%   | 50%  | 33%  |
| 2014          | 106          | 11.9      | 1.5                        | -0.3  | 1.3  | 4.1  | 4.5  | 13%                          | -3%    | 10%   | 26%  | 29%  |
| 2012          | 34           | 2.1       | -7.4                       | -8.7  | -7.2 | -4.4 | -2.9 | -354%                        | -601%  | -279% | -72% | -41% |
| 2011          | 29           | 13.3      | 3.5                        | -3.0  | 2.2  | 4.0  | 2.6  | 27%                          | -31%   | 17%   | 25%  | 19%  |
| 30yr RELO 2.5 | 299          | 10.6      | 5.9                        | 5.4   | 5.6  | 5.7  | 4.3  | 56%                          | 47%    | 51%   | 48%  | 44%  |
| 2016          | 85           | 12.5      | 9.6                        | 2.9   | 3.4  | 1.0  | 0.4  | 76%                          | 45%    | 53%   | 24%  | 13%  |
| 2013          | 152          | 10.9      | 4.6                        | 3.7   | 5.2  | 6.9  | 5.4  | 42%                          | 29%    | 42%   | 46%  | 43%  |
| 2012          | 58           | 7.7       | 2.1                        | -0.7  | 3.9  | 4.4  | 3.7  | 28%                          | -11%   | 38%   | 36%  | 35%  |
| 30yr RELO 3   | 3,928        | 10.3      | 2.9                        | 3.3   | 3.3  | 4.8  | 4.6  | 29%                          | 29%    | 30%   | 37%  | 39%  |
| 2017          | 1,083        | 3.3       | 0.5                        | 0.0   | 0.7  | 1.2  | -    | 16%                          | 1%     | 22%   | 28%  | -    |
| 2016          | 669          | 9.1       | 3.1                        | 1.5   | 1.2  | 1.2  | 1.3  | 34%                          | 18%    | 16%   | 17%  | 21%  |
| 2015          | 1,118        | 15.4      | 7.0                        | 5.4   | 6.0  | 7.7  | 5.9  | 46%                          | 38%    | 41%   | 45%  | 41%  |
| 2014          | 376          | 16.3      | 5.6                        | 10.5  | 9.3  | 8.8  | 6.7  | 35%                          | 51%    | 48%   | 46%  | 41%  |
| 2013          | 352          | 10.6      | 2.0                        | 8.4   | 4.9  | 6.1  | 5.4  | 19%                          | 47%    | 35%   | 38%  | 37%  |
| 2012          | 290          | 9.8       | 1.6                        | 4.4   | 3.6  | 4.6  | 4.4  | 16%                          | 33%    | 29%   | 33%  | 33%  |
| 2011          | 41           | 0.9       | -10.1                      | -13.2 | -3.6 | 0.7  | 1.6  | -1120%                       | -1358% | -54%  | 6%   | 14%  |
| 30yr RELO 3.5 | 1,617        | 16.7      | 6.6                        | 5.1   | 5.8  | 6.8  | 6.7  | 40%                          | 30%    | 35%   | 38%  | 38%  |
| 2017          | 233          | 3.3       | -1.3                       | -2.1  | -0.5 | -0.3 | -    | -39%                         | -55%   | -10%  | -6%  | -    |
| 2014          | 712          | 22.4      | 9.2                        | 2.2   | 6.7  | 7.7  | 5.8  | 41%                          | 12%    | 32%   | 35%  | 29%  |
| 2013          | 224          | 11.4      | -0.1                       | 9.9   | 3.4  | 6.8  | 6.2  | -1%                          | 44%    | 22%   | 35%  | 34%  |
| 2012          | 128          | 15.7      | 5.0                        | 4.5   | 6.3  | 6.4  | 4.6  | 32%                          | 27%    | 36%   | 35%  | 28%  |
| 2011          | 161          | 14.9      | 4.5                        | 5.9   | 4.5  | 5.2  | 5.7  | 30%                          | 34%    | 30%   | 31%  | 33%  |
| 2010          | 143          | 18.6      | 7.3                        | 11.0  | 4.0  | 2.0  | 3.5  | 39%                          | 50%    | 26%   | 14%  | 23%  |
| 30yr RELO 4   | 518          | 19.8      | 6.4                        | 3.5   | 5.7  | 7.7  | 6.5  | 32%                          | 19%    | 29%   | 35%  | 31%  |
| 2014          | 124          | 38.7      | 22.0                       | -1.9  | 11.5 | 12.4 | 9.3  | 57%                          | -12%   | 40%   | 41%  | 35%  |
| 2011          | 199          | 14.5      | 1.3                        | -1.2  | 1.6  | 4.2  | 3.8  | 9%                           | -9%    | 10%   | 23%  | 21%  |
| 2010          | 159          | 10.4      | -2.9                       | 6.5   | 2.8  | 4.2  | 4.7  | -27%                         | 32%    | 17%   | 23%  | 25%  |
| 30yr RELO 4.5 | 104          | 37.6      | 22.1                       | 5.9   | 13.5 | 9.1  | 8.7  | 59%                          | 26%    | 46%   | 36%  | 34%  |
| 2011          | 43           | 43.7      | 28.3                       | -7.7  | 13.4 | 11.9 | 7.5  | 65%                          | -84%   | 45%   | 42%  | 31%  |

Source: Bloomberg

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# FGLMC Prepayment Speed Comparison

## November 2017

### FGLMC Jumbos vs FGLMC Generic

|                | Jumbo Data   |           | CPR Differences vs Generic |       |       |      |      | % CPR Differences vs Generic |         |       |      |       |
|----------------|--------------|-----------|----------------------------|-------|-------|------|------|------------------------------|---------|-------|------|-------|
|                | Cur Bal (MM) | CPR (Nov) | Nov                        | Oct   | 3mo   | 6mo  | 12mo | Nov                          | Oct     | 3mo   | 6mo  | 12mo  |
| 15yr Jumbo 2   | 38           | 14.0      | 6.5                        | 3.6   | 1.3   | -3.2 | -2.5 | 46%                          | 31%     | 14%   | -63% | -48%  |
| 2013           | 26           | 19.8      | 11.5                       | 7.3   | 4.2   | -2.3 | -2.7 | 58%                          | 44%     | 32%   | -32% | -47%  |
| 15yr Jumbo 2.5 | 479          | 8.0       | -0.5                       | -1.9  | -1.1  | -0.7 | -0.4 | -6%                          | -26%    | -15%  | -8%  | -5%   |
| 2016           | 35           | 0.7       | -6.4                       | -6.4  | -6.1  | -0.7 | -0.3 | -940%                        | -1181%  | -697% | -11% | -6%   |
| 2015           | 76           | 17.2      | 8.6                        | 0.6   | 0.8   | 0.8  | 1.1  | 50%                          | 6%      | 8%    | 8%   | 11%   |
| 2014           | 28           | 4.0       | -5.9                       | -10.1 | -2.4  | -2.5 | -0.6 | -148%                        | -474%   | -28%  | -28% | -5%   |
| 2013           | 143          | 11.0      | 1.4                        | -5.3  | -2.4  | -2.4 | -2.5 | 13%                          | -123%   | -33%  | -32% | -35%  |
| 2012           | 190          | 3.9       | -5.8                       | -0.9  | -1.9  | -2.2 | -2.1 | -149%                        | -9%     | -23%  | -25% | -26%  |
| 15yr Jumbo 3   | 95           | 11.7      | 1.9                        | -5.1  | 4.1   | 0.0  | 0.6  | 16%                          | -83%    | 28%   | 0%   | 5%    |
| 2015           | 14           | 1.0       | -9.7                       | -10.9 | 0.3   | -5.1 | -6.9 | -981%                        | -2866%  | 2%    | -80% | -186% |
| 2014           | 16           | 26.9      | 14.3                       | 13.5  | 13.4  | 1.9  | 1.8  | 53%                          | 51%     | 52%   | 13%  | 13%   |
| 2012           | 33           | 3.4       | -7.1                       | -10.8 | -0.9  | -1.4 | -0.3 | -207%                        | -776%   | -8%   | -13% | -3%   |
| 2011           | 22           | 1.1       | -10.0                      | -12.1 | 0.2   | -1.2 | -0.9 | -928%                        | -1608%  | 2%    | -11% | -8%   |
| 30yr Jumbo 2.5 | 1,125        | 5.2       | 0.6                        | 2.9   | 1.5   | 1.6  | 1.5  | 12%                          | 36%     | 24%   | 24%  | 25%   |
| 2013           | 112          | 5.7       | 1.9                        | -4.3  | -1.2  | 3.7  | 1.5  | 34%                          | -619%   | -40%  | 44%  | 24%   |
| 2012           | 986          | 5.3       | -1.2                       | 1.4   | -0.3  | -0.9 | -1.0 | -22%                         | 16%     | -4%   | -13% | -17%  |
| 30yr Jumbo 3   | 13,259       | 6.0       | -1.4                       | -0.1  | -0.8  | -1.1 | -0.8 | -24%                         | -1%     | -11%  | -16% | -12%  |
| 2017           | 1,003        | 2.2       | -0.1                       | 0.8   | 0.6   | -1.1 | -    | -6%                          | 25%     | 22%   | -72% | -     |
| 2016           | 4,867        | 4.9       | -1.5                       | 1.8   | 0.0   | -0.6 | -0.8 | -31%                         | 20%     | 0%    | -11% | -19%  |
| 2015           | 2,024        | 8.5       | 0.3                        | -0.9  | 0.0   | -0.9 | -0.3 | 4%                           | -12%    | 0%    | -11% | -4%   |
| 2014           | 141          | 16.5      | 6.9                        | -0.8  | 3.0   | 0.0  | -0.3 | 42%                          | -10%    | 24%   | 0%   | -3%   |
| 2013           | 2,352        | 5.5       | -2.8                       | -2.4  | -2.2  | -2.8 | -2.3 | -51%                         | -37%    | -34%  | -42% | -36%  |
| 2012           | 2,872        | 6.9       | -1.7                       | -0.9  | -1.8  | -1.5 | -0.9 | -25%                         | -10%    | -26%  | -18% | -11%  |
| 30yr Jumbo 3.5 | 12,760       | 14.7      | 4.7                        | 5.0   | 4.4   | 2.8  | 2.5  | 32%                          | 30%     | 29%   | 20%  | 19%   |
| 2017           | 3,126        | 13.6      | 8.4                        | 11.0  | 8.1   | 4.8  | -    | 62%                          | 63%     | 58%   | 48%  | -     |
| 2016           | 3,022        | 16.6      | 6.4                        | 8.9   | 8.2   | 7.0  | 4.9  | 38%                          | 43%     | 43%   | 40%  | 37%   |
| 2015           | 2,544        | 18.0      | 5.9                        | 0.9   | 3.2   | 1.9  | 2.6  | 33%                          | 6%      | 20%   | 13%  | 19%   |
| 2014           | 848          | 9.9       | -3.4                       | 3.6   | 1.5   | 1.4  | 2.2  | -34%                         | 20%     | 10%   | 9%   | 14%   |
| 2013           | 806          | 13.2      | 1.9                        | -0.7  | -0.5  | -1.7 | 0.7  | 14%                          | -6%     | -5%   | -15% | 6%    |
| 2012           | 2,137        | 12.5      | 1.6                        | 1.7   | 0.6   | -0.4 | 0.6  | 13%                          | 13%     | 5%    | -3%  | 5%    |
| 2011           | 272          | 9.8       | -1.1                       | 2.4   | 0.8   | 0.1  | 0.3  | -11%                         | 18%     | 7%    | 1%   | 3%    |
| 30yr Jumbo 4   | 4,265        | 19.4      | 6.5                        | 8.4   | 7.3   | 6.8  | 6.1  | 33%                          | 36%     | 35%   | 33%  | 30%   |
| 2017           | 794          | 25.9      | 17.2                       | 20.2  | 17.9  | 16.6 | -    | 66%                          | 66%     | 66%   | 68%  | -     |
| 2016           | 459          | 20.0      | 6.7                        | 12.7  | 9.6   | 13.9 | 12.9 | 34%                          | 46%     | 41%   | 51%  | 53%   |
| 2015           | 767          | 22.4      | 6.5                        | -0.1  | 4.1   | 4.0  | 5.5  | 29%                          | -1%     | 20%   | 20%  | 27%   |
| 2014           | 943          | 16.7      | 1.1                        | 9.5   | 5.5   | 3.0  | 4.0  | 6%                           | 35%     | 25%   | 15%  | 19%   |
| 2013           | 355          | 14.3      | -0.5                       | 1.0   | 0.8   | 0.3  | 3.3  | -3%                          | 5%      | 5%    | 2%   | 17%   |
| 2012           | 197          | 13.2      | -0.6                       | -3.5  | 3.9   | -0.5 | 0.1  | -4%                          | -33%    | 22%   | -3%  | 1%    |
| 2011           | 538          | 13.5      | 0.2                        | 2.1   | -0.5  | 1.8  | 2.4  | 1%                           | 13%     | -4%   | 11%  | 14%   |
| 2010           | 213          | 20.7      | 8.0                        | 5.0   | 3.6   | 6.2  | 4.7  | 38%                          | 27%     | 21%   | 31%  | 25%   |
| 30yr Jumbo 4.5 | 487          | 24.9      | 9.3                        | 1.3   | 4.3   | 5.5  | 7.7  | 38%                          | 7%      | 21%   | 26%  | 31%   |
| 2017           | 28           | 66.1      | 53.8                       | 10.4  | 24.3  | 17.7 | -    | 81%                          | 42%     | 66%   | 63%  | -     |
| 2015           | 47           | 13.0      | -2.8                       | -15.7 | -2.5  | 2.7  | 8.0  | -21%                         | -78500% | -19%  | 15%  | 34%   |
| 2014           | 97           | 16.6      | -2.8                       | 5.9   | 2.2   | 7.6  | 9.2  | -17%                         | 25%     | 11%   | 29%  | 33%   |
| 2013           | 56           | 45.9      | 27.2                       | 16.2  | 18.6  | 16.1 | 14.7 | 59%                          | 51%     | 53%   | 48%  | 46%   |
| 2011           | 200          | 11.4      | -3.7                       | -0.3  | -3.6  | -1.5 | 3.0  | -33%                         | -2%     | -30%  | -10% | 15%   |
| 2010           | 49           | 40.0      | 24.5                       | -4.6  | 12.0  | 7.5  | 8.4  | 61%                          | -35%    | 42%   | 31%  | 33%   |
| 30yr Jumbo 5   | 44           | 11.0      | -6.6                       | -18.5 | -14.1 | -5.8 | 5.3  | -60%                         | -14223% | -361% | -46% | 22%   |
| 2011           | 37           | 12.8      | -6.5                       | -18.0 | -14.2 | -7.9 | 2.8  | -51%                         | -12871% | -314% | -74% | 13%   |

Source: Bloomberg

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# FGLMC Prepayment Speed Comparison

## November 2017

### FGLMC 105-125 LTV vs FGLMC Generic

|                      | HLTV Data    |           | CPR Differences vs Generic |       |       |       |       | % CPR Differences vs Generic |        |        |        |       |
|----------------------|--------------|-----------|----------------------------|-------|-------|-------|-------|------------------------------|--------|--------|--------|-------|
|                      | Cur Bal (MM) | CPR (Nov) | Nov                        | Oct   | 3mo   | 6mo   | 12mo  | Nov                          | Oct    | 3mo    | 6mo    | 12mo  |
| 15yr 105-125 LTV 2.5 | 678          | 9.7       | 1.2                        | 2.3   | 1.5   | 2.8   | 2.3   | 12%                          | 21%    | 15%    | 24%    | 21%   |
| 2013                 | 307          | 9.2       | -0.4                       | 3.6   | 1.2   | 1.8   | 0.8   | -5%                          | 27%    | 11%    | 15%    | 8%    |
| 2012                 | 344          | 10.5      | 0.8                        | -0.5  | 0.1   | 1.7   | 1.2   | 8%                           | -5%    | 1%     | 14%    | 11%   |
| 15yr 105-125 LTV 3   | 991          | 10.6      | 0.7                        | -0.1  | -0.4  | 1.0   | 0.4   | 7%                           | -1%    | -4%    | 9%     | 4%    |
| 2017                 | 14           | 6.6       | 0.8                        | -7.7  | -4.5  | -5.1  | -     | 12%                          | -1373% | -172%  | -295%  | -     |
| 2016                 | 53           | 0.5       | -8.4                       | -2.0  | -6.3  | -5.6  | -5.0  | -1824%                       | -25%   | -191%  | -137%  | -172% |
| 2015                 | 83           | 1.9       | -8.8                       | -0.8  | -4.3  | -2.9  | -3.5  | -454%                        | -7%    | -62%   | -34%   | -48%  |
| 2014                 | 67           | 16.5      | 3.9                        | -5.5  | -2.9  | -3.2  | -4.5  | 24%                          | -75%   | -30%   | -33%   | -58%  |
| 2013                 | 301          | 10.2      | -1.5                       | -1.7  | -2.8  | -0.8  | -1.7  | -15%                         | -17%   | -32%   | -7%    | -16%  |
| 2012                 | 457          | 12.1      | 1.6                        | 0.8   | 0.8   | 1.9   | 1.4   | 13%                          | 6%     | 6%     | 14%    | 10%   |
| 15yr 105-125 LTV 3.5 | 518          | 13.2      | 1.4                        | -3.4  | -0.2  | -0.3  | -0.3  | 11%                          | -37%   | -1%    | -3%    | -2%   |
| 2017                 | 13           | 9.1       | 1.3                        | -8.3  | -4.7  | -5.5  | -     | 15%                          | -3442% | -145%  | -314%  | -     |
| 2016                 | 10           | 0.8       | -10.0                      | 1.1   | -6.4  | -1.6  | -3.0  | -1263%                       | 10%    | -142%  | -18%   | -52%  |
| 2015                 | 38           | 7.7       | -5.0                       | -9.9  | -6.9  | -3.7  | -2.4  | -65%                         | -336%  | -127%  | -43%   | -28%  |
| 2014                 | 119          | 14.5      | 2.0                        | -5.7  | -1.9  | -2.6  | -2.7  | 13%                          | -69%   | -17%   | -24%   | -27%  |
| 2013                 | 172          | 13.0      | 0.9                        | -5.7  | -2.2  | -1.7  | -1.1  | 7%                           | -90%   | -22%   | -15%   | -10%  |
| 2012                 | 120          | 13.1      | -2.2                       | 2.1   | 2.0   | -0.4  | 0.1   | -17%                         | 15%    | 13%    | -3%    | 1%    |
| 2011                 | 40           | 21.1      | 8.4                        | 0.2   | 6.6   | 5.7   | 6.1   | 40%                          | 2%     | 34%    | 29%    | 31%   |
| 15yr 105-125 LTV 4   | 104          | 14.6      | -0.2                       | 9.6   | 3.3   | 2.4   | 0.8   | -1%                          | 40%    | 18%    | 14%    | 5%    |
| 2014                 | 15           | 8.0       | -4.1                       | 26.4  | 8.8   | 2.9   | -1.5  | -52%                         | 68%    | 42%    | 18%    | -13%  |
| 2013                 | 24           | 1.6       | -10.3                      | -8.3  | -5.7  | -0.6  | 0.6   | -663%                        | -168%  | -80%   | -5%    | 4%    |
| 2011                 | 43           | 25.2      | 11.0                       | 8.7   | 7.9   | 5.9   | 4.2   | 43%                          | 37%    | 36%    | 29%    | 22%   |
| 20yr 105-125 LTV 3   | 547          | 9.2       | 1.2                        | 0.9   | 0.8   | 1.2   | 1.3   | 13%                          | 9%     | 9%     | 12%    | 14%   |
| 2013                 | 230          | 11.2      | 2.2                        | 0.6   | 0.7   | 0.4   | 0.3   | 19%                          | 6%     | 7%     | 4%     | 3%    |
| 2012                 | 276          | 8.9       | -1.2                       | 0.1   | -0.4  | 0.1   | -0.3  | -13%                         | 1%     | -5%    | 1%     | -3%   |
| 20yr 105-125 LTV 3.5 | 1,116        | 9.6       | -1.5                       | 0.0   | 0.2   | 0.4   | 0.5   | -15%                         | 0%     | 2%     | 3%     | 4%    |
| 2017                 | 17           | 8.1       | 1.0                        | -8.0  | -4.6  | -4.5  | -     | 13%                          | -6123% | -161%  | -294%  | -     |
| 2016                 | 27           | 0.2       | -12.9                      | -0.5  | -7.8  | -5.9  | -5.3  | -7178%                       | -5%    | -224%  | -130%  | -156% |
| 2015                 | 59           | 5.9       | -6.5                       | -13.5 | -7.5  | -6.4  | -4.5  | -110%                        | -8413% | -164%  | -104%  | -73%  |
| 2014                 | 56           | 10.8      | -2.6                       | -11.6 | -7.0  | -6.7  | -7.0  | -24%                         | -249%  | -100%  | -94%   | -120% |
| 2013                 | 339          | 6.9       | -3.9                       | -2.7  | 2.5   | -1.4  | -1.5  | -56%                         | -27%   | -26%   | -14%   | -14%  |
| 2012                 | 614          | 11.8      | 0.2                        | 3.4   | 2.5   | 1.9   | 1.8   | 2%                           | 21%    | 17%    | 14%    | 13%   |
| 20yr 105-125 LTV 4   | 418          | 19.6      | 8.1                        | 3.3   | 3.1   | 2.0   | 1.6   | 42%                          | 20%    | 20%    | 14%    | 11%   |
| 2015                 | 26           | 15.8      | 6.2                        | -6.6  | -3.0  | -3.9  | -5.1  | 39%                          | -84%   | -37%   | -46%   | -78%  |
| 2014                 | 78           | 14.7      | 2.0                        | -7.4  | -4.4  | -4.9  | -3.0  | 14%                          | -119%  | -49%   | -58%   | -30%  |
| 2013                 | 114          | 19.4      | 8.4                        | -0.3  | 2.1   | 0.2   | 0.5   | 43%                          | -3%    | 14%    | 1%     | 4%    |
| 2012                 | 146          | 21.6      | 7.7                        | 12.3  | 6.4   | 4.9   | 3.5   | 36%                          | 48%    | 32%    | 26%    | 20%   |
| 2011                 | 32           | 27.5      | 15.6                       | 3.0   | 8.1   | 8.2   | 7.9   | 57%                          | 18%    | 39%    | 38%    | 36%   |
| 20yr 105-125 LTV 4.5 | 118          | 18.6      | 5.5                        | 5.0   | 4.7   | 1.9   | 0.3   | 29%                          | 25%    | 25%    | 11%    | 2%    |
| 2013                 | 30           | 14.8      | -3.1                       | 12.9  | 4.3   | -0.9  | -6.0  | -21%                         | 51%    | 24%    | -7%    | -55%  |
| 2011                 | 56           | 16.1      | 3.5                        | 6.5   | 3.8   | 1.6   | 2.4   | 21%                          | 32%    | 22%    | 10%    | 13%   |
| 30yr 105-125 LTV 3   | 1,114        | 8.5       | 1.2                        | 3.7   | 2.1   | 2.5   | 2.4   | 13%                          | 32%    | 22%    | 24%    | 26%   |
| 2013                 | 578          | 9.2       | 0.8                        | 2.9   | 1.4   | 1.1   | 0.3   | 9%                           | 25%    | 14%    | 10%    | 4%    |
| 2012                 | 492          | 8.5       | -0.1                       | 3.0   | 1.3   | 1.2   | 1.2   | -2%                          | 25%    | 13%    | 11%    | 12%   |
| 30yr 105-125 LTV 3.5 | 7,595        | 11.2      | 1.2                        | 0.7   | 1.1   | 1.5   | 0.8   | 11%                          | 6%     | 10%    | 12%    | 7%    |
| 2017                 | 28           | 0.3       | -4.9                       | -6.5  | -5.6  | -5.0  | -     | -1948%                       | -5375% | -2701% | -2834% | -     |
| 2016                 | 179          | 0.7       | -9.6                       | -9.3  | -8.9  | -6.9  | -5.9  | -1427%                       | -381%  | -470%  | -201%  | -246% |
| 2015                 | 190          | 9.7       | -2.4                       | -5.2  | -2.7  | -2.9  | -4.3  | -25%                         | -58%   | -27%   | -61%   | -59%  |
| 2014                 | 37           | 0.2       | -13.1                      | -7.0  | -3.8  | -3.8  | -6.2  | -6895%                       | -95%   | -39%   | -37%   | -85%  |
| 2013                 | 3,184        | 11.2      | -0.1                       | -0.3  | 0.0   | 0.1   | -0.7  | -1%                          | -3%    | 0%     | 1%     | -6%   |
| 2012                 | 3,963        | 11.9      | 1.1                        | 1.9   | 1.6   | 1.5   | 0.8   | 9%                           | 14%    | 13%    | 11%    | 6%    |
| 30yr 105-125 LTV 4   | 8,432        | 12.5      | -0.4                       | 0.5   | 0.0   | 0.6   | -0.6  | -3%                          | 4%     | 0%     | 4%     | -5%   |
| 2017                 | 141          | 1.7       | -7.0                       | -8.1  | -7.7  | -6.4  | -     | -416%                        | -381%  | -578%  | -459%  | -     |
| 2016                 | 239          | 10.5      | -2.7                       | -9.4  | -7.1  | -7.8  | -7.0  | -26%                         | -171%  | -105%  | -136%  | -164% |
| 2015                 | 465          | 10.4      | -5.6                       | -10.5 | -7.8  | -8.3  | -7.9  | -53%                         | -149%  | -91%   | -100%  | -114% |
| 2014                 | 500          | 9.1       | -6.6                       | -6.1  | -6.5  | -6.4  | -8.0  | -72%                         | -52%   | -64%   | -60%   | -89%  |
| 2013                 | 2,201        | 13.8      | -1.0                       | -1.7  | -1.7  | -1.6  | -3.1  | -7%                          | -12%   | -13%   | -11%   | -24%  |
| 2012                 | 4,538        | 12.3      | -1.4                       | 3.0   | 0.9   | 1.2   | 0.8   | -12%                         | 18%    | 6%     | 8%     | 6%    |
| 2011                 | 284          | 21.7      | 8.4                        | 0.0   | 3.6   | 3.7   | 2.2   | 39%                          | 0%     | 21%    | 20%    | 13%   |
| 2010                 | 63           | 11.6      | -1.2                       | 9.1   | 3.3   | 3.5   | 1.2   | -10%                         | 40%    | 20%    | 20%    | 8%    |
| 30yr 105-125 LTV 4.5 | 4,141        | 16.2      | 0.7                        | 0.1   | 1.1   | 1.2   | -0.6  | 4%                           | 0%     | 7%     | 7%     | -4%   |
| 2017                 | 59           | 0.2       | -12.1                      | -12.7 | -11.6 | -9.1  | -     | -5757%                       | -759%  | -1726% | -673%  | -     |
| 2016                 | 15           | 0.2       | -17.4                      | -15.1 | -14.0 | -13.1 | -12.0 | -7923%                       | -4861% | -553%  | -386%  | -377% |
| 2015                 | 117          | 7.1       | -8.6                       | -5.2  | -5.3  | -6.0  | -7.3  | -120%                        | -49%   | -53%   | -61%   | -89%  |
| 2014                 | 781          | 13.6      | -5.7                       | -4.1  | -3.5  | -3.7  | -5.8  | -42%                         | -30%   | -24%   | -25%   | -47%  |
| 2013                 | 901          | 14.1      | -4.6                       | -1.9  | -2.8  | -3.2  | -4.9  | -33%                         | -14%   | -21%   | -23%   | -39%  |
| 2012                 | 416          | 15.6      | 0.5                        | -2.7  | 0.3   | 1.9   | 1.6   | 3%                           | -19%   | 2%     | 10%    | 9%    |
| 2011                 | 1,219        | 18.5      | 3.4                        | 2.5   | 4.0   | 3.9   | 2.6   | 18%                          | 13%    | 20%    | 20%    | 14%   |
| 2010                 | 628          | 20.9      | 5.3                        | 7.9   | 5.6   | 4.3   | 3.4   | 26%                          | 30%    | 25%    | 20%    | 17%   |
| 30yr 105-125 LTV 5   | 1,853        | 20.8      | 3.1                        | 4.1   | 3.1   | 3.4   | 3.0   | 15%                          | 18%    | 15%    | 16%    | 14%   |
| 2014                 | 35           | 18.1      | 5.9                        | 12.9  | 9.2   | 9.1   | -0.9  | 32%                          | 70%    | 48%    | 41%    | -5%   |
| 2013                 | 32           | 13.3      | -5.7                       | -4.2  | 2.9   | -1.6  | -1.7  | -43%                         | -39%   | 16%    | -9%    | -10%  |
| 2011                 | 1,205        | 20.1      | 0.8                        | 3.1   | 0.9   | 2.1   | 2.5   | 4%                           | 15%    | 5%     | 10%    | 11%   |
| 2010                 | 532          | 22.6      | 4.3                        | 9.1   | 6.0   | 4.9   | 4.7   | 19%                          | 33%    | 25%    | 20%    | 19%   |
| 2009                 | 43           | 23.2      | 6.0                        | -3.4  | 5.1   | 5.1   | 5.5   | 26%                          | -21%   | 22%    | 22%    | 22%   |
| 30yr 105-125 LTV 5.5 | 171          | 22.8      | 5.3                        | 2.0   | 4.8   | 7.2   | 4.7   | 23%                          | 9%     | 21%    | 29%    | 20%   |
| 2011                 | 42           | 28.0      | 6.3                        | -0.2  | 6.5   | 7.6   | 7.6   | 22%                          | -1%    | 27%    | 31%    | 31%   |
| 2010                 | 88           | 19.8      | 1.1                        | 1.5   | 2.0   | 9.4   | 6.3   | 5%                           | 6%     | 9%     | 32%    | 24%   |
| 2009                 | 38           | 25.2      | 7.6                        | -0.7  | 3.0   | -1.4  | -1.2  | 30%                          | -4%    | 15%    | -8%    | -7%   |

Source: Bloomberg

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# FGLMC Prepayment Speed Comparison

## November 2017

### FGLMC 125+ LTV vs FGLMC Generic

|                          | HLTV Data    |             | CPR Differences vs Generic |             |             |             |             | % CPR Differences vs Generic |             |             |             |             |
|--------------------------|--------------|-------------|----------------------------|-------------|-------------|-------------|-------------|------------------------------|-------------|-------------|-------------|-------------|
|                          | Cur Bal (MM) | CPR (Nov)   | Nov                        | Oct         | 3mo         | 6mo         | 12mo        | Nov                          | Oct         | 3mo         | 6mo         | 12mo        |
| <b>30yr 125+ LTV 3</b>   | <b>662</b>   | <b>10.9</b> | <b>3.5</b>                 | <b>3.6</b>  | <b>3.3</b>  | <b>2.7</b>  | <b>2.2</b>  | <b>32%</b>                   | <b>32%</b>  | <b>30%</b>  | <b>25%</b>  | <b>24%</b>  |
| 2013                     | 330          | 12.4        | 4.0                        | 1.5         | 1.8         | -0.1        | -0.4        | 32%                          | 14%         | 17%         | -1%         | -5%         |
| 2012                     | 324          | 9.6         | 1.0                        | 3.8         | 2.7         | 2.4         | 1.2         | 10%                          | 29%         | 24%         | 20%         | 12%         |
| <b>30yr 125+ LTV 3.5</b> | <b>5,968</b> | <b>10.5</b> | <b>0.5</b>                 | <b>0.1</b>  | <b>0.3</b>  | <b>0.2</b>  | <b>-0.5</b> | <b>4%</b>                    | <b>1%</b>   | <b>3%</b>   | <b>1%</b>   | <b>-5%</b>  |
| 2016                     | 54           | 8.0         | -2.3                       | -11.6       | -6.6        | -4.7        | -4.7        | -28%                         | -10564%     | -156%       | -81%        | -129%       |
| 2015                     | 61           | 10.3        | -1.8                       | -4.6        | -4.9        | -5.1        | -4.8        | -17%                         | -49%        | -61%        | -66%        | -72%        |
| 2013                     | 2,610        | 9.0         | -2.3                       | -0.2        | -1.6        | -2.0        | -2.8        | -26%                         | -2%         | -16%        | -19%        | -31%        |
| 2012                     | 3,227        | 11.8        | 0.9                        | 0.3         | 1.0         | 0.4         | -0.4        | 8%                           | 3%          | 9%          | 4%          | -3%         |
| <b>30yr 125+ LTV 4</b>   | <b>8,890</b> | <b>11.9</b> | <b>-1.0</b>                | <b>-2.4</b> | <b>-1.3</b> | <b>-1.0</b> | <b>-2.1</b> | <b>-8%</b>                   | <b>-19%</b> | <b>-11%</b> | <b>-8%</b>  | <b>-18%</b> |
| 2017                     | 41           | 0.2         | -8.5                       | -1.2        | -3.5        | -4.9        | -           | -4052%                       | -14%        | -62%        | -169%       | -           |
| 2016                     | 102          | 3.1         | -10.1                      | -9.4        | -10.9       | -10.2       | -7.1        | -328%                        | -167%       | -369%       | -309%       | -168%       |
| 2015                     | 214          | 7.6         | -8.3                       | -9.1        | -6.8        | -9.0        | -8.7        | -109%                        | -109%       | -71%        | -121%       | -143%       |
| 2014                     | 200          | 6.9         | -8.8                       | -11.0       | -10.3       | -11.0       | -10.5       | -127%                        | -165%       | -161%       | -178%       | -164%       |
| 2013                     | 2,299        | 9.5         | -5.2                       | -4.9        | -4.7        | -4.6        | -5.6        | -55%                         | -42%        | -44%        | -41%        | -55%        |
| 2012                     | 6,034        | 13.3        | -0.4                       | -1.2        | -0.6        | -0.7        | -1.3        | -3%                          | -10%        | -5%         | -5%         | -10%        |
| <b>30yr 125+ LTV 4.5</b> | <b>2,630</b> | <b>13.0</b> | <b>-2.5</b>                | <b>-2.6</b> | <b>-2.8</b> | <b>-2.8</b> | <b>-4.1</b> | <b>-20%</b>                  | <b>-18%</b> | <b>-22%</b> | <b>-21%</b> | <b>-32%</b> |
| 2017                     | 32           | 0.2         | -12.2                      | -14.2       | -12.1       | -9.0        | -           | -8100%                       | -9467%      | -6862%      | -629%       | -           |
| 2016                     | 12           | 23.2        | 5.5                        | -7.5        | -5.6        | -9.1        | -8.5        | 24%                          | -94%        | -51%        | -124%       | -127%       |
| 2015                     | 74           | 10.6        | -5.2                       | -12.4       | -8.1        | -10.2       | -10.0       | -49%                         | -371%       | -111%       | -182%       | -180%       |
| 2014                     | 502          | 9.2         | -10.2                      | -8.2        | -9.3        | -9.6        | -9.5        | -111%                        | -84%        | -102%       | -108%       | -110%       |
| 2013                     | 727          | 8.6         | -10.1                      | -1.4        | -6.4        | -6.9        | -7.7        | -118%                        | -10%        | -63%        | -68%        | -79%        |
| 2012                     | 1,283        | 17.1        | 2.0                        | 0.1         | 0.5         | 0.1         | -0.3        | 12%                          | 1%          | 3%          | 1%          | -2%         |
| <b>30yr 125+ LTV 5</b>   | <b>82</b>    | <b>7.5</b>  | <b>-10.2</b>               | <b>-8.0</b> | <b>-8.8</b> | <b>-7.9</b> | <b>-9.4</b> | <b>-137%</b>                 | <b>-76%</b> | <b>-96%</b> | <b>-76%</b> | <b>-96%</b> |
| 2014                     | 37           | 3.2         | -9.0                       | 1.5         | -2.9        | -5.6        | -8.4        | -285%                        | 21%         | -41%        | -75%        | -95%        |
| 2013                     | 42           | 11.4        | -7.5                       | -7.3        | -5.9        | -6.7        | -8.8        | -66%                         | -99%        | -63%        | -54%        | -85%        |

Source: Bloomberg

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# FGLMC Prepayment Speed Comparison

## November 2017

### FGLMC Relo vs FGLMC Generic

|                      | Relo Data    |             | CPR Differences vs Generic |      |     |     |      | % CPR Differences vs Generic |       |     |     |      |
|----------------------|--------------|-------------|----------------------------|------|-----|-----|------|------------------------------|-------|-----|-----|------|
|                      | Cur Bal (MM) | CPR (Nov)   | Nov                        | Oct  | 3mo | 6mo | 12mo | Nov                          | Oct   | 3mo | 6mo | 12mo |
| <b>30yr Relo 3</b>   | <b>297</b>   | <b>9.8</b>  | 2.4                        | 1.8  | 5.8 | 7.7 | 5.8  | 25%                          | 19%   | 43% | 49% | 46%  |
| 2015                 | 228          | 9.8         | 1.6                        | 1.5  | 5.0 | 7.2 | 4.7  | 16%                          | 15%   | 38% | 45% | 38%  |
| 2012                 | 30           | 7.6         | -1.0                       | -0.4 | 8.6 | 7.8 | 6.1  | -14%                         | -4%   | 50% | 45% | 41%  |
| <b>30yr Relo 3.5</b> | <b>40</b>    | <b>13.8</b> | 3.8                        | -6.1 | 5.2 | 8.8 | 5.9  | 27%                          | -109% | 33% | 44% | 36%  |
| 2014                 | 30           | 18.0        | 4.7                        | -7.2 | 6.1 | 8.0 | 3.8  | 26%                          | -100% | 31% | 36% | 22%  |

Source: Bloomberg

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# GNMA Prepayment Speed Comparison

## November 2017

### GNMA2 Jumbo vs GNMA2 Generic

|                         | Jumbo Data    |             | CPR Differences vs Generic |             |             |            |            | % CPR Differences vs Generic |            |             |            |            |
|-------------------------|---------------|-------------|----------------------------|-------------|-------------|------------|------------|------------------------------|------------|-------------|------------|------------|
|                         | Cur Bal (MM)  | CPR (Nov)   | Nov                        | Oct         | 3mo         | 6mo        | 12mo       | Nov                          | Oct        | 3mo         | 6mo        | 12mo       |
| <b>GNMA 2 Jumbo 2.5</b> | <b>418</b>    | <b>7.1</b>  | <b>-1.6</b>                | <b>-0.2</b> | <b>-1.2</b> | <b>0.5</b> | <b>0.8</b> | <b>-22%</b>                  | <b>-2%</b> | <b>-16%</b> | <b>5%</b>  | <b>11%</b> |
| 2017                    | 28            | 0.2         | -2.9                       | 16.8        | 4.9         | 2.1        | -          | -1694%                       | 97%        | 71%         | 56%        | -          |
| 2016                    | 214           | 7.9         | -0.1                       | -0.2        | -1.1        | 0.8        | 1.0        | -1%                          | -2%        | -17%        | 9%         | 16%        |
| 2015                    | 33            | 28.0        | 18.2                       | -3.7        | 11.2        | 8.3        | 10.1       | 65%                          | -63%       | 52%         | 45%        | 52%        |
| 2013                    | 44            | 0.4         | -9.9                       | 0.1         | -6.9        | -3.5       | -2.7       | -2245%                       | 1%         | -168%       | -40%       | -30%       |
| 2012                    | 90            | 1.4         | -10.9                      | -4.6        | -6.9        | -5.0       | -7.2       | -791%                        | -62%       | -124%       | -52%       | -110%      |
| <b>GNMA 2 Jumbo 3</b>   | <b>23,918</b> | <b>12.7</b> | <b>1.4</b>                 | <b>1.0</b>  | <b>1.2</b>  | <b>1.2</b> | <b>0.6</b> | <b>11%</b>                   | <b>8%</b>  | <b>9%</b>   | <b>9%</b>  | <b>5%</b>  |
| 2017                    | 2,355         | 6.4         | 2.5                        | 1.1         | 1.5         | 0.5        | -          | 38%                          | 19%        | 25%         | 12%        | -          |
| 2016                    | 15,361        | 13.1        | 2.7                        | 2.0         | 2.6         | 2.8        | 2.0        | 21%                          | 15%        | 20%         | 22%        | 21%        |
| 2015                    | 3,214         | 15.9        | 2.1                        | 3.7         | 1.6         | 2.0        | 2.3        | 13%                          | 19%        | 10%         | 12%        | 15%        |
| 2014                    | 365           | 14.6        | 0.3                        | -8.7        | -0.3        | -1.0       | 0.7        | 2%                           | -132%      | -2%         | -6%        | 4%         |
| 2013                    | 1,340         | 12.0        | -1.7                       | -1.2        | -1.1        | -0.8       | -0.2       | -14%                         | -9%        | -9%         | -6%        | -2%        |
| 2012                    | 1,268         | 11.6        | -2.4                       | -0.7        | -1.4        | -0.3       | -0.4       | -21%                         | -5%        | -11%        | -2%        | -3%        |
| <b>GNMA 2 Jumbo 3.5</b> | <b>23,103</b> | <b>17.9</b> | <b>3.5</b>                 | <b>6.0</b>  | <b>4.7</b>  | <b>4.5</b> | <b>4.8</b> | <b>20%</b>                   | <b>28%</b> | <b>25%</b>  | <b>23%</b> | <b>25%</b> |
| 2017                    | 8,976         | 15.3        | 7.5                        | 7.8         | 7.4         | 5.1        | -          | 49%                          | 52%        | 52%         | 50%        | -          |
| 2016                    | 4,868         | 16.7        | 1.7                        | 7.7         | 5.6         | 7.2        | 7.0        | 10%                          | 32%        | 27%         | 33%        | 37%        |
| 2015                    | 5,423         | 22.9        | 4.8                        | 8.8         | 6.5         | 6.6        | 6.9        | 21%                          | 32%        | 26%         | 27%        | 30%        |
| 2014                    | 1,303         | 23.4        | 5.8                        | 3.9         | 4.9         | 3.3        | 4.1        | 25%                          | 17%        | 21%         | 15%        | 18%        |
| 2013                    | 690           | 18.0        | 1.8                        | -5.3        | -0.3        | 2.3        | 4.5        | 10%                          | -47%       | -2%         | 12%        | 22%        |
| 2012                    | 1,668         | 13.7        | -2.2                       | 4.2         | 1.3         | 2.2        | 2.3        | -16%                         | 20%        | 7%          | 11%        | 13%        |
| 2011                    | 164           | 11.2        | -4.4                       | 6.0         | -0.3        | 0.8        | 3.1        | -39%                         | 26%        | -2%         | 4%         | 16%        |
| <b>GNMA 2 Jumbo 4</b>   | <b>4,955</b>  | <b>30.6</b> | <b>10.3</b>                | <b>9.2</b>  | <b>9.6</b>  | <b>7.8</b> | <b>9.3</b> | <b>34%</b>                   | <b>32%</b> | <b>34%</b>  | <b>30%</b> | <b>33%</b> |
| 2017                    | 2,675         | 32.3        | 15.6                       | 18.6        | 16.6        | 12.0       | -          | 48%                          | 65%        | 60%         | 62%        | -          |
| 2016                    | 512           | 32.2        | 3.7                        | 1.0         | 6.0         | 14.8       | 18.8       | 11%                          | 3%         | 16%         | 36%        | 48%        |
| 2015                    | 644           | 29.7        | 7.8                        | 11.7        | 10.3        | 8.9        | 11.3       | 26%                          | 35%        | 33%         | 30%        | 34%        |
| 2014                    | 340           | 42.2        | 20.9                       | 8.3         | 14.2        | 11.8       | 12.6       | 50%                          | 29%        | 41%         | 36%        | 38%        |
| 2013                    | 87            | 26.3        | 5.5                        | 18.0        | 12.7        | 8.2        | 12.5       | 21%                          | 46%        | 38%         | 28%        | 37%        |
| 2012                    | 125           | 12.3        | -5.6                       | -9.9        | -5.4        | -1.7       | 1.1        | -46%                         | -117%      | -45%        | -11%       | 6%         |
| 2011                    | 206           | 19.9        | 1.4                        | -1.3        | -1.0        | 0.2        | 4.4        | 7%                           | -7%        | -6%         | 1%         | 19%        |
| 2010                    | 352           | 16.3        | -1.1                       | -1.2        | 2.1         | 3.7        | 3.4        | -7%                          | -7%        | 11%         | 17%        | 16%        |
| <b>GNMA 2 Jumbo 4.5</b> | <b>616</b>    | <b>25.0</b> | <b>2.5</b>                 | <b>3.8</b>  | <b>2.4</b>  | <b>4.5</b> | <b>7.8</b> | <b>10%</b>                   | <b>15%</b> | <b>11%</b>  | <b>18%</b> | <b>28%</b> |
| 2017                    | 181           | 27.1        | 18.8                       | 3.2         | 10.1        | 13.3       | -          | 69%                          | 32%        | 60%         | 75%        | -          |
| 2016                    | 35            | 44.1        | -6.9                       | 10.3        | 3.1         | 11.0       | 26.1       | -16%                         | 20%        | 7%          | 28%        | 57%        |
| 2015                    | 29            | 23.4        | -1.9                       | 30.8        | 16.6        | 11.0       | 20.8       | -8%                          | 59%        | 41%         | 31%        | 50%        |
| 2014                    | 45            | 22.7        | -3.2                       | -11.8       | -1.3        | 6.7        | 8.8        | -14%                         | -102%      | -6%         | 22%        | 26%        |
| 2013                    | 28            | 0.1         | -22.8                      | 7.4         | -4.9        | 7.7        | 9.5        | -45600%                      | 26%        | -30%        | 26%        | 29%        |
| 2011                    | 104           | 30.6        | 10.6                       | 11.7        | 7.6         | 6.7        | 7.2        | 35%                          | 37%        | 28%         | 25%        | 27%        |
| 2010                    | 166           | 9.7         | -9.3                       | 3.6         | -2.4        | -0.9       | 3.5        | -96%                         | 16%        | -14%        | -5%        | 15%        |
| <b>GNMA 2 Jumbo 5</b>   | <b>132</b>    | <b>14.0</b> | <b>-6.5</b>                | <b>8.7</b>  | <b>4.8</b>  | <b>4.6</b> | <b>6.5</b> | <b>-46%</b>                  | <b>30%</b> | <b>19%</b>  | <b>18%</b> | <b>24%</b> |
| 2010                    | 48            | 0.5         | -19.8                      | 17.9        | 1.1         | 1.6        | 3.3        | -4115%                       | 46%        | 5%          | 7%         | 14%        |
| 2009                    | 43            | 20.6        | 0.4                        | -8.3        | 3.9         | 4.8        | 8.9        | 2%                           | -68%       | 16%         | 19%        | 29%        |

Source: Bloomberg

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