

# GNMA Prepayment Speeds

## November 2017

### GNMA 15yr

|                      | Indicative Data |        |            |     |     |      | Prepayment Speeds |      |       |              |       |       | Buyout Prepayment Component |      |      |      |      |
|----------------------|-----------------|--------|------------|-----|-----|------|-------------------|------|-------|--------------|-------|-------|-----------------------------|------|------|------|------|
|                      | Cur Bal (MM)    | Factor | # of Pools | WAC | WAM | WALA | Nov               | Oct  | Chg   | % Chg        | 3mo   | 6mo   | 12mo                        | 1mo  | 3mo  | 6mo  | 12mo |
| <b>GNMA 15yr 2</b>   | 44              | 0.507  | 23         | 2.5 | 117 | 63   | <b>1.0</b>        | 3.7  | -2.7  | <b>*n.m.</b> | 4.16  | 7.24  | 8.81                        | 0.00 | 0.00 | 0.00 | 0.00 |
| 2013                 | 28              | 0.504  | 17         | 2.5 | 118 | 62   | <b>1.3</b>        | 5.5  | -4.2  | <b>-76%</b>  | 4.28  | 6.62  | 9.80                        | 0.00 | 0.00 | 0.00 | 0.00 |
| <b>GNMA 15yr 2.5</b> | 1,498           | 0.438  | 312        | 3.0 | 114 | 3    | <b>11.1</b>       | 12.4 | -1.3  | <b>-11%</b>  | 12.21 | 12.68 | 12.22                       | 0.55 | 0.26 | 0.25 | 0.29 |
| 2014                 | 16              | 0.712  | 14         | 3.0 | 136 | 15   | <b>7.1</b>        | 0.3  | 6.8   | <b>*n.m.</b> | 4.29  | 5.97  | 4.29                        | 0.00 | 0.00 | 0.00 | 0.00 |
| 2013                 | 497             | 0.493  | 104        | 3.0 | 119 | 27   | <b>10.1</b>       | 12.1 | -2.0  | <b>-17%</b>  | 11.11 | 11.23 | 11.31                       | 1.05 | 0.44 | 0.28 | 0.33 |
| 2012                 | 963             | 0.410  | 178        | 3.0 | 111 | 53   | <b>11.6</b>       | 12.7 | -1.1  | <b>-9%</b>   | 12.84 | 13.46 | 12.80                       | 0.31 | 0.18 | 0.20 | 0.25 |
| <b>GNMA 15yr 3</b>   | 2,559           | 0.340  | 674        | 3.5 | 108 | 13   | <b>13.2</b>       | 14.5 | -1.3  | <b>-9%</b>   | 13.94 | 14.38 | 13.94                       | 0.46 | 0.40 | 0.44 | 0.43 |
| 2014                 | 79              | 0.516  | 34         | 3.5 | 133 | 16   | <b>23.6</b>       | 12.8 | 10.9  | <b>85%</b>   | 22.03 | 19.25 | 16.92                       | 0.00 | 0.00 | 0.00 | 0.17 |
| 2013                 | 279             | 0.463  | 99         | 3.5 | 121 | 25   | <b>14.7</b>       | 15.0 | -0.3  | <b>-2%</b>   | 14.15 | 13.47 | 12.70                       | 0.00 | 0.25 | 0.37 | 0.48 |
| 2012                 | 1,527           | 0.348  | 316        | 3.5 | 107 | 56   | <b>12.9</b>       | 14.0 | -1.1  | <b>-8%</b>   | 13.37 | 13.96 | 13.71                       | 0.70 | 0.38 | 0.44 | 0.47 |
| 2011                 | 594             | 0.290  | 178        | 3.5 | 101 | 64   | <b>12.2</b>       | 16.5 | -4.3  | <b>-26%</b>  | 14.34 | 15.24 | 14.54                       | 0.09 | 0.57 | 0.56 | 0.35 |
| 2010                 | 74              | 0.229  | 40         | 3.5 | 90  | 73   | <b>11.5</b>       | 10.4 | 1.1   | <b>11%</b>   | 13.41 | 15.03 | 15.88                       | 0.00 | 0.28 | 0.14 | 0.20 |
| <b>GNMA 15yr 3.5</b> | 1,420           | 0.222  | 629        | 4.0 | 97  | 58   | <b>14.7</b>       | 15.2 | -0.5  | <b>-3%</b>   | 14.64 | 14.57 | 14.47                       | 0.85 | 0.46 | 0.51 | 0.60 |
| 2013                 | 87              | 0.471  | 43         | 4.0 | 123 | 39   | <b>4.2</b>        | 17.7 | -13.5 | <b>-76%</b>  | 10.56 | 11.97 | 11.64                       | 0.00 | 0.44 | 0.68 | 0.91 |
| 2012                 | 76              | 0.378  | 59         | 4.0 | 108 | 52   | <b>13.2</b>       | 15.0 | -1.7  | <b>-12%</b>  | 12.31 | 11.17 | 11.77                       | 6.47 | 2.41 | 1.82 | 1.47 |
| 2011                 | 763             | 0.219  | 294        | 4.0 | 96  | 65   | <b>16.9</b>       | 14.9 | 2.0   | <b>13%</b>   | 15.19 | 14.96 | 14.95                       | 0.61 | 0.25 | 0.40 | 0.49 |
| 2010                 | 460             | 0.193  | 196        | 4.0 | 90  | 74   | <b>13.0</b>       | 15.9 | -2.9  | <b>-18%</b>  | 14.79 | 14.99 | 14.67                       | 0.53 | 0.46 | 0.40 | 0.53 |
| <b>GNMA 15yr 4</b>   | 2,177           | 0.138  | 1257       | 4.5 | 83  | 67   | <b>13.9</b>       | 15.8 | -1.9  | <b>-12%</b>  | 15.02 | 14.97 | 14.78                       | 1.38 | 1.08 | 0.87 | 0.98 |
| 2011                 | 420             | 0.189  | 231        | 4.5 | 95  | 62   | <b>12.1</b>       | 14.6 | -2.6  | <b>-18%</b>  | 14.73 | 16.28 | 16.23                       | 1.24 | 1.57 | 1.09 | 1.10 |
| 2010                 | 945             | 0.167  | 369        | 4.5 | 85  | 79   | <b>13.6</b>       | 16.7 | -3.1  | <b>-19%</b>  | 15.09 | 14.56 | 14.20                       | 1.18 | 0.77 | 0.72 | 1.00 |
| 2009                 | 760             | 0.126  | 378        | 4.5 | 75  | 88   | <b>15.1</b>       | 14.9 | 0.2   | <b>1%</b>    | 14.97 | 14.68 | 14.53                       | 1.74 | 1.22 | 0.95 | 0.90 |
| <b>GNMA 15yr 4.5</b> | 577             | 0.058  | 1487       | 5.0 | 73  | 34   | <b>13.1</b>       | 15.2 | -2.0  | <b>-13%</b>  | 14.37 | 14.93 | 15.37                       | 0.00 | 1.02 | 0.88 | 0.98 |
| 2010                 | 157             | 0.163  | 146        | 5.0 | 84  | 75   | <b>12.6</b>       | 13.2 | -0.6  | <b>-5%</b>   | 13.26 | 13.59 | 13.85                       | 1.25 | 1.99 | 1.57 | 1.71 |
| 2009                 | 335             | 0.115  | 360        | 5.0 | 75  | 78   | <b>10.8</b>       | 14.6 | -3.8  | <b>-26%</b>  | 12.94 | 13.51 | 14.00                       | 0.99 | 1.23 | 1.04 | 1.03 |
| <b>GNMA 15yr 5</b>   | 242             | 0.023  | 1872       | 5.5 | 51  | 78   | <b>21.9</b>       | 17.0 | 4.8   | <b>28%</b>   | 19.17 | 18.47 | 18.48                       | 0.00 | 1.02 | 1.30 | 1.42 |
| 2009                 | 65              | 0.118  | 162        | 5.5 | 74  | 41   | <b>24.6</b>       | 14.6 | 10.0  | <b>68%</b>   | 18.67 | 16.26 | 15.55                       | 3.26 | 1.70 | 1.59 | 1.87 |
| 2008                 | 77              | 0.067  | 240        | 5.5 | 63  | 65   | <b>16.7</b>       | 11.6 | 5.1   | <b>44%</b>   | 14.72 | 14.48 | 15.22                       | 0.00 | 1.15 | 1.60 | 1.70 |

\*n.m. - Not Meaningful

Source: Bloomberg

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# GNMA Prepayment Speeds

## November 2017

### GNMA2 15yr

|                        | Indicative Data |        |            |     |     |      | Prepayment Speeds |      |       |              |       |       | Buyout Prepayment Component |      |      |      |      |
|------------------------|-----------------|--------|------------|-----|-----|------|-------------------|------|-------|--------------|-------|-------|-----------------------------|------|------|------|------|
|                        | Cur Bal (MM)    | Factor | # of Pools | WAC | WAM | WALA | Nov               | Oct  | Chg   | % Chg        | 3mo   | 6mo   | 12mo                        | 1mo  | 3mo  | 6mo  | 12mo |
| <b>GNMA 2 15yr 2</b>   | 724             | 0.618  | 58         | 2.5 | 136 | 1    | <b>8.1</b>        | 9.9  | -1.8  | <b>-18%</b>  | 8.24  | 8.41  | 7.89                        | 0.00 | 0.00 | 0.00 | 0.01 |
| 2017                   | 44              | 0.966  | 9          | 2.5 | 172 | 1    | <b>0.6</b>        | 7.2  | -6.6  | <b>*n.m.</b> | 4.33  | 2.42  | -                           | 0.00 | 0.00 | 0.00 | -    |
| 2016                   | 195             | 0.902  | 10         | 2.5 | 163 | 13   | <b>3.4</b>        | 9.0  | -5.6  | <b>-62%</b>  | 5.25  | 4.73  | 3.65                        | 0.00 | 0.00 | 0.00 | 0.00 |
| 2015                   | 62              | 0.755  | 14         | 2.5 | 146 | 34   | <b>12.9</b>       | 13.8 | -0.9  | <b>-6%</b>   | 11.69 | 10.77 | 8.85                        | 0.00 | 0.00 | 0.00 | 0.13 |
| 2013                   | 264             | 0.523  | 13         | 2.5 | 119 | 61   | <b>10.2</b>       | 10.7 | -0.6  | <b>-5%</b>   | 10.21 | 10.45 | 10.20                       | 0.00 | 0.00 | 0.00 | 0.00 |
| 2012                   | 155             | 0.487  | 10         | 2.5 | 114 | 66   | <b>10.3</b>       | 7.7  | 2.6   | <b>33%</b>   | 7.97  | 9.38  | 8.83                        | 0.00 | 0.00 | 0.00 | 0.00 |
| <b>GNMA 2 15yr 2.5</b> | 12,784          | 0.643  | 93         | 2.9 | 145 | 2    | <b>11.4</b>       | 11.4 | 0.0   | <b>0%</b>    | 11.05 | 11.28 | 10.04                       | 0.07 | 0.09 | 0.09 | 0.08 |
| 2017                   | 1,654           | 0.957  | 15         | 2.9 | 172 | 1    | <b>6.3</b>        | 4.7  | 1.6   | <b>*n.m.</b> | 4.75  | 4.44  | -                           | 0.00 | 0.00 | 0.00 | -    |
| 2016                   | 4,853           | 0.844  | 12         | 2.9 | 161 | 14   | <b>11.8</b>       | 11.6 | 0.2   | <b>2%</b>    | 10.97 | 10.53 | 8.13                        | 0.00 | 0.06 | 0.03 | 0.02 |
| 2015                   | 1,883           | 0.670  | 17         | 2.9 | 146 | 28   | <b>12.4</b>       | 13.4 | -0.9  | <b>-7%</b>   | 13.18 | 13.22 | 12.25                       | 0.00 | 0.06 | 0.08 | 0.07 |
| 2014                   | 361             | 0.568  | 16         | 3.0 | 136 | 29   | <b>15.7</b>       | 11.8 | 3.9   | <b>33%</b>   | 14.07 | 15.40 | 14.44                       | 0.00 | 0.00 | 0.14 | 0.10 |
| 2013                   | 2,196           | 0.488  | 13         | 2.9 | 119 | 54   | <b>12.0</b>       | 13.0 | -1.1  | <b>-8%</b>   | 12.06 | 12.45 | 11.65                       | 0.24 | 0.18 | 0.22 | 0.18 |
| 2012                   | 1,794           | 0.416  | 11         | 2.9 | 111 | 57   | <b>12.0</b>       | 11.9 | 0.1   | <b>1%</b>    | 11.93 | 13.02 | 12.07                       | 0.20 | 0.18 | 0.14 | 0.15 |
| 2011                   | 43              | 0.330  | 7          | 3.1 | 101 | 79   | <b>17.7</b>       | 13.1 | 4.6   | <b>35%</b>   | 15.92 | 13.56 | 16.04                       | 0.00 | 0.00 | 0.00 | 0.00 |
| <b>GNMA 2 15yr 3</b>   | 16,122          | 0.531  | 173        | 3.4 | 143 | 1    | <b>14.5</b>       | 14.7 | -0.3  | <b>-2%</b>   | 14.59 | 14.53 | 13.72                       | 0.19 | 0.16 | 0.15 | 0.15 |
| 2017                   | 3,069           | 0.951  | 12         | 3.5 | 173 | 3    | <b>8.0</b>        | 8.3  | -0.3  | <b>-4%</b>   | 7.28  | 5.79  | -                           | 0.00 | 0.02 | 0.01 | -    |
| 2016                   | 2,958           | 0.782  | 15         | 3.4 | 160 | 16   | <b>14.8</b>       | 15.8 | -1.0  | <b>-6%</b>   | 15.25 | 14.28 | 11.68                       | 0.01 | 0.10 | 0.07 | 0.05 |
| 2015                   | 3,221           | 0.612  | 22         | 3.4 | 148 | 27   | <b>18.3</b>       | 16.9 | 1.3   | <b>8%</b>    | 17.68 | 17.46 | 16.21                       | 0.38 | 0.23 | 0.17 | 0.14 |
| 2014                   | 2,000           | 0.479  | 30         | 3.4 | 136 | 38   | <b>17.6</b>       | 17.8 | -0.3  | <b>-1%</b>   | 18.18 | 18.31 | 16.98                       | 0.13 | 0.09 | 0.14 | 0.16 |
| 2013                   | 1,759           | 0.428  | 14         | 3.4 | 121 | 52   | <b>14.9</b>       | 14.7 | 0.2   | <b>1%</b>    | 14.60 | 14.98 | 14.29                       | 0.12 | 0.28 | 0.24 | 0.28 |
| 2012                   | 2,624           | 0.327  | 61         | 3.3 | 108 | 65   | <b>13.9</b>       | 15.0 | -1.2  | <b>-8%</b>   | 14.65 | 14.72 | 14.16                       | 0.33 | 0.21 | 0.25 | 0.20 |
| 2011                   | 478             | 0.278  | 12         | 3.4 | 102 | 62   | <b>14.3</b>       | 13.5 | 0.8   | <b>6%</b>    | 12.81 | 14.45 | 13.61                       | 0.69 | 0.42 | 0.37 | 0.32 |
| <b>GNMA 2 15yr 3.5</b> | 5,658           | 0.420  | 185        | 3.9 | 142 | 2    | <b>14.6</b>       | 15.8 | -1.2  | <b>-8%</b>   | 14.78 | 14.71 | 14.62                       | 0.37 | 0.42 | 0.36 | 0.40 |
| 2017                   | 1,958           | 0.939  | 10         | 3.9 | 172 | 1    | <b>12.1</b>       | 12.2 | -0.1  | <b>-1%</b>   | 11.58 | 8.20  | -                           | 0.13 | 0.16 | 0.09 | -    |
| 2016                   | 364             | 0.737  | 12         | 3.9 | 161 | 7    | <b>17.8</b>       | 20.3 | -2.6  | <b>-13%</b>  | 17.51 | 17.31 | 15.57                       | 0.37 | 0.40 | 0.28 | 0.30 |
| 2015                   | 539             | 0.575  | 18         | 3.9 | 149 | 17   | <b>17.8</b>       | 15.6 | 2.2   | <b>14%</b>   | 15.90 | 16.43 | 15.77                       | 0.85 | 0.93 | 0.75 | 0.68 |
| 2014                   | 947             | 0.408  | 27         | 3.8 | 134 | 33   | <b>16.4</b>       | 20.3 | -3.9  | <b>-19%</b>  | 17.78 | 18.49 | 17.77                       | 0.20 | 0.41 | 0.46 | 0.47 |
| 2013                   | 578             | 0.364  | 27         | 3.9 | 125 | 39   | <b>12.8</b>       | 19.9 | -7.1  | <b>-36%</b>  | 16.36 | 17.47 | 16.81                       | 1.26 | 0.50 | 0.37 | 0.43 |
| 2012                   | 211             | 0.261  | 55         | 3.9 | 108 | 57   | <b>16.3</b>       | 14.8 | 1.5   | <b>10%</b>   | 15.99 | 15.96 | 15.04                       | 1.04 | 0.77 | 0.43 | 0.62 |
| 2011                   | 728             | 0.203  | 18         | 3.9 | 100 | 67   | <b>15.6</b>       | 14.3 | 1.3   | <b>9%</b>    | 15.32 | 16.32 | 15.20                       | 0.08 | 0.57 | 0.52 | 0.46 |
| 2010                   | 328             | 0.203  | 12         | 3.9 | 91  | 74   | <b>13.7</b>       | 12.8 | 1.0   | <b>8%</b>    | 13.12 | 14.24 | 14.83                       | 0.00 | 0.20 | 0.15 | 0.22 |
| <b>GNMA 2 15yr 4</b>   | 1,042           | 0.163  | 145        | 4.3 | 97  | 94   | <b>16.1</b>       | 16.8 | -0.7  | <b>-4%</b>   | 16.19 | 16.67 | 16.58                       | 1.18 | 0.96 | 0.89 | 0.91 |
| 2017                   | 15              | 0.935  | 5          | 4.3 | 170 | 78   | <b>12.2</b>       | 29.2 | -17.1 | <b>-58%</b>  | 23.06 | 13.76 | -                           | 0.00 | 0.00 | 0.00 | -    |
| 2014                   | 52              | 0.425  | 25         | 4.4 | 134 | 31   | <b>15.1</b>       | 14.2 | 0.9   | <b>6%</b>    | 11.47 | 13.53 | 15.36                       | 3.61 | 1.44 | 1.39 | 1.21 |
| 2013                   | 80              | 0.360  | 16         | 4.4 | 125 | 39   | <b>20.3</b>       | 19.4 | 0.9   | <b>5%</b>    | 21.49 | 21.67 | 19.11                       | 0.95 | 1.78 | 1.39 | 1.20 |
| 2011                   | 494             | 0.153  | 22         | 4.3 | 96  | 72   | <b>16.3</b>       | 16.8 | -0.5  | <b>-3%</b>   | 16.21 | 16.66 | 16.70                       | 1.20 | 0.77 | 0.57 | 0.80 |
| 2010                   | 229             | 0.147  | 21         | 4.3 | 87  | 60   | <b>13.2</b>       | 17.2 | -3.9  | <b>-23%</b>  | 15.55 | 16.30 | 15.99                       | 1.25 | 0.68 | 0.60 | 0.72 |
| 2009                   | 146             | 0.128  | 13         | 4.4 | 76  | 89   | <b>19.4</b>       | 15.5 | 3.8   | <b>25%</b>   | 15.72 | 15.66 | 16.29                       | 0.53 | 0.91 | 1.26 | 0.94 |
| <b>GNMA 2 15yr 4.5</b> | 270             | 0.117  | 127        | 4.9 | 81  | 95   | <b>21.0</b>       | 15.6 | 5.4   | <b>34%</b>   | 18.16 | 16.75 | 15.90                       | 0.96 | 0.87 | 0.71 | 1.02 |
| 2011                   | 35              | 0.148  | 16         | 4.8 | 96  | 84   | <b>24.0</b>       | 13.9 | 10.1  | <b>72%</b>   | 22.16 | 19.74 | 18.52                       | 0.00 | 0.00 | 0.18 | 1.05 |
| 2010                   | 82              | 0.149  | 16         | 4.8 | 83  | 81   | <b>16.2</b>       | 6.3  | 9.8   | <b>156%</b>  | 14.35 | 15.14 | 15.01                       | 0.00 | 0.66 | 0.79 | 1.14 |
| 2009                   | 142             | 0.122  | 23         | 4.9 | 76  | 89   | <b>23.3</b>       | 20.8 | 2.5   | <b>12%</b>   | 19.32 | 16.57 | 15.30                       | 1.80 | 1.27 | 0.80 | 0.95 |

\*n.m. - Not Meaningful

Source: Bloomberg

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# GNMA Prepayment Speeds

## November 2017

### GNMA 30yr

|                      | Indicative Data |        |            |     |     |      | Prepayment Speeds |      |       |             |       |       | Buyout Prepayment Component |        |      |      |      |
|----------------------|-----------------|--------|------------|-----|-----|------|-------------------|------|-------|-------------|-------|-------|-----------------------------|--------|------|------|------|
|                      | Cur Bal (MM)    | Factor | # of Pools | WAC | WAM | WALA | Nov               | Oct  | Chg   | % Chg       | 3mo   | 6mo   | 12mo                        | 1mo    | 3mo  | 6mo  | 12mo |
| <b>GNMA 30yr 2</b>   | 74              | 0.748  | 51         | 2.5 | 313 | 47   | 2.2               | 8.9  | -6.7  | <b>-76%</b> | 5.49  | 6.52  | 6.60                        | 1.70   | 1.03 | 1.18 | 1.18 |
| 2016                 | 19              | 0.969  | 12         | 2.5 | 344 | 16   | 0.0               | 0.0  | 0.0   | *n.m.       | 0.03  | 0.95  | 0.51                        | 0.00   | 1.81 | 0.91 | 0.46 |
| 2013                 | 52              | 0.691  | 32         | 2.5 | 303 | 57   | 3.0               | 12.3 | -9.3  | <b>-75%</b> | 7.61  | 8.71  | 8.81                        | 2.38   | 0.80 | 1.32 | 1.43 |
| <b>GNMA 30yr 2.5</b> | 2,390           | 0.643  | 714        | 3.0 | 300 | 16   | 8.6               | 9.3  | -0.7  | <b>-8%</b>  | 9.71  | 10.42 | 9.71                        | 0.65   | 0.56 | 0.45 | 0.51 |
| 2016                 | 230             | 0.955  | 85         | 3.0 | 337 | 23   | 0.2               | 0.5  | -0.3  | *n.m.       | 0.69  | 1.67  | 1.86                        | 0.00   | 0.00 | 0.05 | 0.14 |
| 2015                 | 43              | 0.872  | 37         | 3.0 | 328 | 32   | 10.5              | 4.7  | 5.8   | *n.m.       | 6.70  | 4.91  | 4.66                        | 0.00   | 2.28 | 1.51 | 1.19 |
| 2013                 | 968             | 0.647  | 275        | 3.0 | 297 | 49   | 8.5               | 9.2  | -0.7  | <b>-8%</b>  | 9.85  | 10.54 | 9.97                        | 0.38   | 0.47 | 0.41 | 0.50 |
| 2012                 | 1,097           | 0.600  | 209        | 3.0 | 294 | 57   | 10.3              | 11.1 | -0.8  | <b>-7%</b>  | 11.35 | 12.23 | 11.18                       | 0.77   | 0.56 | 0.47 | 0.50 |
| <b>GNMA 30yr 3</b>   | 26,338          | 0.535  | 4835       | 3.5 | 299 | 18   | 13.4              | 13.9 | -0.5  | <b>-4%</b>  | 13.70 | 14.37 | 13.46                       | 1.17   | 1.07 | 0.91 | 1.01 |
| 2017                 | 156             | 0.989  | 77         | 3.5 | 347 | 30   | 0.3               | 0.1  | 0.2   | *n.m.       | 0.22  | 0.35  | -                           | 0.00   | 0.00 | 0.00 | -    |
| 2016                 | 703             | 0.954  | 213        | 3.5 | 340 | 8    | 3.3               | 3.0  | 0.3   | *n.m.       | 2.79  | 2.80  | 1.95                        | 1.14   | 1.27 | 1.09 | 0.76 |
| 2015                 | 2,016           | 0.750  | 397        | 3.5 | 324 | 27   | 11.7              | 12.9 | -1.3  | <b>-10%</b> | 12.10 | 12.55 | 11.22                       | 0.82   | 0.67 | 0.64 | 0.80 |
| 2014                 | 447             | 0.712  | 187        | 3.5 | 317 | 30   | 11.8              | 12.1 | -0.4  | <b>-3%</b>  | 11.14 | 12.80 | 11.67                       | 1.45   | 0.95 | 0.68 | 0.71 |
| 2013                 | 12,350          | 0.523  | 1931       | 3.5 | 298 | 53   | 14.0              | 14.5 | -0.4  | <b>-3%</b>  | 14.52 | 15.30 | 14.36                       | 1.34   | 1.23 | 0.97 | 1.04 |
| 2012                 | 10,562          | 0.498  | 1839       | 3.5 | 291 | 60   | 13.8              | 14.4 | -0.5  | <b>-4%</b>  | 14.01 | 14.55 | 13.65                       | 1.02   | 0.96 | 0.90 | 1.04 |
| 2011                 | 100             | 0.535  | 176        | 3.5 | 282 | 78   | 13.2              | 11.5 | 1.7   | <b>15%</b>  | 11.92 | 11.52 | 11.07                       | 2.99   | 1.24 | 1.05 | 1.46 |
| <b>GNMA 30yr 3.5</b> | 25,356          | 0.410  | 6925       | 4.0 | 294 | 21   | 15.2              | 15.4 | -0.2  | <b>-1%</b>  | 15.13 | 16.02 | 15.69                       | 1.80   | 1.66 | 1.53 | 1.68 |
| 2017                 | 1,046           | 0.992  | 245        | 4.0 | 354 | 65   | 2.5               | 1.0  | 1.5   | *n.m.       | 1.21  | 1.12  | -                           | 0.23   | 0.08 | 0.04 | -    |
| 2016                 | 864             | 0.929  | 207        | 4.0 | 341 | 10   | 6.9               | 6.8  | 0.1   | <b>1%</b>   | 5.90  | 6.21  | 4.44                        | 0.66   | 1.06 | 1.30 | 1.13 |
| 2015                 | 1,800           | 0.657  | 540        | 4.0 | 325 | 28   | 17.8              | 15.6 | 2.2   | <b>14%</b>  | 15.93 | 15.37 | 15.14                       | 1.78   | 1.57 | 1.44 | 1.64 |
| 2014                 | 1,417           | 0.563  | 409        | 4.0 | 317 | 36   | 15.1              | 15.9 | -0.8  | <b>-5%</b>  | 15.12 | 15.85 | 15.86                       | 2.08   | 1.68 | 1.59 | 2.21 |
| 2013                 | 4,011           | 0.491  | 1272       | 4.0 | 295 | 51   | 15.9              | 15.9 | 0.0   | <b>0%</b>   | 15.73 | 16.22 | 15.11                       | 2.39   | 1.90 | 1.65 | 1.78 |
| 2012                 | 9,811           | 0.373  | 2501       | 4.0 | 286 | 64   | 15.7              | 16.9 | -1.2  | <b>-7%</b>  | 15.89 | 16.93 | 16.44                       | 1.95   | 1.86 | 1.69 | 1.81 |
| 2011                 | 4,817           | 0.320  | 1219       | 4.0 | 280 | 71   | 16.3              | 15.5 | 0.9   | <b>6%</b>   | 16.21 | 17.04 | 17.03                       | 1.39   | 1.39 | 1.37 | 1.52 |
| 2010                 | 1,545           | 0.312  | 483        | 4.0 | 267 | 82   | 16.0              | 15.4 | 0.6   | <b>4%</b>   | 15.52 | 16.84 | 16.54                       | 1.73   | 1.60 | 1.20 | 1.07 |
| 2009                 | 40              | 0.305  | 34         | 4.0 | 247 | 106  | 28.9              | 6.5  | 22.5  | <b>347%</b> | 15.97 | 11.47 | 11.71                       | 2.57   | 0.86 | 0.43 | 0.69 |
| <b>GNMA 30yr 4</b>   | 31,069          | 0.295  | 8567       | 4.5 | 283 | 16   | 18.5              | 18.0 | 0.5   | <b>3%</b>   | 18.02 | 18.33 | 18.06                       | 2.50   | 2.27 | 2.02 | 2.14 |
| 2017                 | 719             | 0.976  | 128        | 4.5 | 353 | 75   | 8.0               | 5.7  | 2.3   | <b>41%</b>  | 5.42  | 3.56  | -                           | 0.31   | 0.59 | 0.65 | -    |
| 2016                 | 1,408           | 0.809  | 270        | 4.5 | 342 | 13   | 20.6              | 16.2 | 4.4   | <b>27%</b>  | 17.29 | 17.55 | 13.99                       | 4.36   | 3.14 | 2.54 | 1.86 |
| 2015                 | 3,172           | 0.542  | 1050       | 4.5 | 327 | 26   | 27.6              | 23.2 | 4.4   | <b>19%</b>  | 24.49 | 23.52 | 21.96                       | 5.23   | 4.44 | 3.57 | 3.36 |
| 2014                 | 1,824           | 0.515  | 632        | 4.5 | 311 | 38   | 18.5              | 16.0 | 2.6   | <b>16%</b>  | 16.98 | 17.28 | 16.83                       | 3.67   | 3.81 | 3.29 | 3.80 |
| 2013                 | 988             | 0.474  | 496        | 4.5 | 299 | 48   | 13.4              | 17.1 | -3.7  | <b>-21%</b> | 14.87 | 15.11 | 15.76                       | 4.52   | 3.70 | 3.07 | 3.10 |
| 2012                 | 794             | 0.374  | 698        | 4.5 | 284 | 60   | 16.4              | 18.9 | -2.5  | <b>-13%</b> | 15.78 | 16.56 | 15.91                       | 5.33   | 3.69 | 3.13 | 3.01 |
| 2011                 | 7,012           | 0.257  | 2427       | 4.5 | 276 | 74   | 17.8              | 17.7 | 0.1   | <b>1%</b>   | 17.95 | 18.63 | 18.63                       | 2.35   | 2.13 | 1.89 | 2.00 |
| 2010                 | 11,789          | 0.260  | 1986       | 4.5 | 267 | 85   | 17.8              | 17.9 | -0.1  | <b>0%</b>   | 17.82 | 18.19 | 18.15                       | 1.47   | 1.54 | 1.50 | 1.72 |
| 2009                 | 3,323           | 0.200  | 766        | 4.5 | 249 | 99   | 16.0              | 18.1 | -2.0  | <b>-11%</b> | 17.11 | 17.51 | 17.31                       | 1.49   | 1.36 | 1.32 | 1.50 |
| <b>GNMA 30yr 4.5</b> | 35,644          | 0.159  | 10519      | 5.0 | 263 | 61   | 19.5              | 20.1 | -0.6  | <b>-3%</b>  | 19.51 | 20.08 | 20.42                       | 2.40   | 2.21 | 2.09 | 2.29 |
| 2017                 | 1,713           | 0.939  | 383        | 5.0 | 354 | 78   | 19.5              | 20.9 | -1.3  | <b>-6%</b>  | 19.09 | 11.97 | -                           | 1.23   | 0.58 | 0.38 | -    |
| 2016                 | 531             | 0.718  | 277        | 5.0 | 341 | 6    | 23.3              | 24.1 | -0.8  | <b>-3%</b>  | 22.90 | 26.38 | 23.26                       | 3.18   | 2.65 | 2.06 | 1.55 |
| 2015                 | 569             | 0.553  | 328        | 5.0 | 329 | 23   | 26.5              | 26.4 | 0.1   | <b>0%</b>   | 24.09 | 22.88 | 23.86                       | 9.05   | 5.39 | 3.65 | 3.33 |
| 2014                 | 51              | 0.494  | 49         | 5.0 | 305 | 40   | 23.9              | 3.9  | 20.0  | *n.m.       | 14.49 | 13.42 | 15.98                       | 1.37   | 2.51 | 2.57 | 6.94 |
| 2013                 | 140             | 0.487  | 119        | 5.0 | 291 | 46   | 11.6              | 13.1 | -1.5  | <b>-11%</b> | 12.31 | 13.81 | 14.28                       | 1.93   | 2.60 | 2.95 | 4.02 |
| 2012                 | 18              | 0.312  | 39         | 5.0 | 281 | 68   | 18.3              | 11.2 | 7.1   | <b>63%</b>  | 14.72 | 16.94 | 17.74                       | 4.51   | 5.40 | 2.74 | 4.22 |
| 2011                 | 3,240           | 0.219  | 1808       | 5.0 | 274 | 78   | 19.5              | 18.1 | 1.4   | <b>8%</b>   | 18.06 | 18.51 | 18.96                       | 2.98   | 2.68 | 2.48 | 2.88 |
| 2010                 | 10,261          | 0.188  | 2722       | 5.0 | 262 | 89   | 19.8              | 19.6 | 0.2   | <b>1%</b>   | 19.47 | 20.34 | 20.73                       | 2.38   | 2.17 | 2.13 | 2.30 |
| 2009                 | 18,281          | 0.130  | 3333       | 5.0 | 252 | 99   | 19.2              | 20.5 | -1.3  | <b>-7%</b>  | 19.84 | 20.58 | 20.84                       | 2.18   | 2.14 | 2.04 | 2.20 |
| 2008                 | 163             | 0.079  | 152        | 5.0 | 241 | 108  | 12.2              | 24.1 | -11.9 | <b>-49%</b> | 18.12 | 18.62 | 19.97                       | 4.88   | 4.64 | 3.42 | 4.07 |
| <b>GNMA 30yr 5</b>   | 21,515          | 0.108  | 12338      | 5.5 | 243 | 84   | 17.8              | 18.6 | -0.8  | <b>-4%</b>  | 18.06 | 18.47 | 19.08                       | 3.07   | 2.72 | 2.53 | 2.81 |
| 2017                 | 466             | 0.968  | 161        | 5.5 | 355 | 104  | 15.1              | 8.5  | 6.6   | <b>77%</b>  | 10.09 | 6.92  | -                           | 2.01   | 0.68 | 0.34 | -    |
| 2016                 | 11              | 0.596  | 12         | 5.5 | 340 | 20   | 16.8              | 40.9 | -24.2 | <b>-59%</b> | 35.93 | 27.30 | 36.19                       | 0.00   | 0.00 | 0.00 | 0.58 |
| 2015                 | 56              | 0.575  | 33         | 5.5 | 328 | 22   | 17.7              | 22.1 | -4.4  | <b>-20%</b> | 24.69 | 24.11 | 30.16                       | 4.00   | 5.67 | 4.16 | 2.79 |
| 2013                 | 32              | 0.475  | 27         | 5.5 | 304 | 39   | 8.0               | 19.5 | -11.5 | <b>-59%</b> | 14.51 | 21.58 | 23.71                       | 4.24   | 4.46 | 3.42 | 5.45 |
| 2011                 | 237             | 0.232  | 329        | 5.5 | 273 | 71   | 18.0              | 14.5 | 3.5   | <b>24%</b>  | 16.29 | 17.31 | 17.07                       | 1.93   | 3.21 | 3.43 | 3.81 |
| 2010                 | 3,032           | 0.210  | 1612       | 5.5 | 261 | 88   | 17.9              | 18.1 | -0.2  | <b>-1%</b>  | 18.25 | 18.53 | 19.01                       | 3.35   | 2.96 | 2.83 | 3.18 |
| 2009                 | 12,134          | 0.126  | 3775       | 5.5 | 252 | 99   | 18.9              | 19.3 | -0.4  | <b>-2%</b>  | 18.91 | 19.42 | 20.05                       | 3.38   | 2.93 | 2.71 | 3.01 |
| 2008                 | 1,702           | 0.059  | 1232       | 5.5 | 240 | 110  | 18.6              | 21.0 | -2.3  | <b>-11%</b> | 19.08 | 19.45 | 20.26                       | 3.04   | 2.82 | 2.51 | 2.90 |
| 2007                 | 127             | 0.068  | 280        | 5.5 | 226 | 116  | 16.1              | 17.7 | -1.6  | <b>-9%</b>  | 16.66 | 15.52 | 18.33                       | 8.20   | 4.53 | 3.39 | 3.39 |
| <b>GNMA 30yr 5.5</b> | 9,776           | 0.050  | 14257      | 6.0 | 207 | 91   | 16.4              | 16.7 | -0.4  | <b>-2%</b>  | 16.34 | 16.76 | 17.46                       | 3.00   | 2.75 | 2.63 | 2.82 |
| 2010                 | 67              | 0.143  | 193        | 6.0 | 262 | 88   | 14.2              | 19.7 | -5.5  | <b>-28%</b> | 16.07 | 13.57 | 18.44                       | 4.12   | 3.31 | 3.83 | 5.11 |
| 2009                 | 1,096           | 0.125  | 1433       | 6.0 | 251 | 99   | 17.1              | 19.3 | -2.2  | <b>-12%</b> | 17.09 | 17.64 | 19.34                       | 4.85   | 3.92 | 3.82 | 4.04 |
| 2008                 | 2,605           | 0.044  | 2330       | 6.0 | 239 | 111  | 20.8              | 19.4 | 1.4   | <b>7%</b>   | 19.73 | 20.14 | 20.80                       | 3.82   | 3.52 | 3.51 | 3.71 |
| 2007                 | 517             | 0.050  | 971        | 6.0 | 226 | 115  | 19.2              | 18.9 | 0.3   | <b>2%</b>   | 19.02 | 19.37 | 20.65                       | 3.55   | 3.11 | 2.66 | 2.78 |
| <b>GNMA 30yr 6</b>   | 6,975           | 0.037  | 16289      | 6.5 | 202 | 95   | 16.5              | 16.3 | 0.2   | <b>1%</b>   | 16.28 | 16.68 | 17.26                       | 0.00   | 2.34 | 2.61 | 2.97 |
| 2009                 | 169             | 0.118  | 531        | 6.5 | 248 | 100  | 22.5              | 23.7 | -1.2  | <b>-5%</b>  | 20.76 | 19.69 | 20.83                       | 7.03   | 4.94 | 5.57 | 5.36 |
| 2008                 | 2,116           | 0.044  | 2377       | 6.5 | 239 | 109  | 19.3              | 18.2 | 1.1   | <b>6%</b>   | 19.02 | 19.76 | 20.97                       | 4.60</ |      |      |      |

# GNMA Prepayment Speeds

November 2017

GNMA2 30yr

|                        | Indicative Data |        |            |     |     |      | Prepayment Speeds |      |       |              |       |       | Buyout Prepayment Component |       |       |       |       |
|------------------------|-----------------|--------|------------|-----|-----|------|-------------------|------|-------|--------------|-------|-------|-----------------------------|-------|-------|-------|-------|
|                        | Cur Bal (MM)    | Factor | # of Pools | WAC | WAM | WALA | Nov               | Oct  | Chg   | % Chg        | 3mo   | 6mo   | 12mo                        | 1mo   | 3mo   | 6mo   | 12mo  |
| <b>GNMA 2 30yr 2</b>   | 86              | 0.851  | 103        | 2.6 | 330 | 2    | <b>1.9</b>        | 12.0 | -10.0 | <b>-84%</b>  | 7.97  | 6.14  | 6.02                        | 0.00  | 0.00  | 0.37  | 1.01  |
| 2016                   | 57              | 0.961  | 57         | 2.6 | 343 | 17   | <b>2.9</b>        | 3.8  | -0.9  | <b>*n.m.</b> | 6.30  | 4.43  | 2.39                        | 0.00  | 0.00  | 0.00  | 0.00  |
| 2013                   | 18              | 0.705  | 25         | 2.5 | 304 | 56   | <b>0.0</b>        | 21.5 | -21.5 | <b>*n.m.</b> | 10.51 | 9.71  | 12.09                       | 0.00  | 0.00  | 0.00  | 3.14  |
| <b>GNMA 2 30yr 2.5</b> | 15,555          | 0.822  | 401        | 3.0 | 332 | 9    | <b>8.6</b>        | 8.6  | 0.0   | <b>0%</b>    | 8.62  | 8.70  | 7.04                        | 0.25  | 0.22  | 0.21  | 0.24  |
| 2017                   | 288             | 0.986  | 56         | 3.0 | 350 | 9    | <b>3.1</b>        | 0.6  | 2.5   | <b>*n.m.</b> | 2.01  | 1.59  | -                           | 0.00  | 0.41  | 0.20  | -     |
| 2016                   | 11,430          | 0.922  | 160        | 3.0 | 342 | 13   | <b>8.0</b>        | 8.0  | 0.0   | <b>0%</b>    | 7.85  | 7.49  | 5.34                        | 0.15  | 0.15  | 0.13  | 0.14  |
| 2015                   | 641             | 0.800  | 89         | 2.9 | 325 | 27   | <b>9.9</b>        | 9.4  | 0.4   | <b>5%</b>    | 10.19 | 10.25 | 9.18                        | 0.77  | 0.36  | 0.35  | 0.39  |
| 2014                   | 21              | 0.731  | 6          | 2.9 | 314 | 46   | <b>17.3</b>       | 0.3  | 17.0  | <b>*n.m.</b> | 9.08  | 11.70 | 12.24                       | 0.00  | 0.00  | 0.00  | 0.14  |
| 2013                   | 2,176           | 0.605  | 62         | 3.0 | 297 | 54   | <b>10.3</b>       | 11.0 | -0.7  | <b>-6%</b>   | 11.00 | 12.17 | 11.69                       | 0.76  | 0.55  | 0.54  | 0.56  |
| 2012                   | 998             | 0.557  | 26         | 3.0 | 293 | 56   | <b>12.3</b>       | 11.9 | 0.4   | <b>3%</b>    | 12.52 | 14.51 | 13.71                       | 0.00  | 0.16  | 0.31  | 0.46  |
| <b>GNMA 2 30yr 3</b>   | 429,496         | 0.725  | 2283       | 3.4 | 328 | 4    | <b>11.3</b>       | 12.1 | -0.8  | <b>-7%</b>   | 11.67 | 11.86 | 10.21                       | 0.69  | 0.79  | 0.66  | 0.62  |
| 2017                   | 34,507          | 0.982  | 196        | 3.5 | 352 | 4    | <b>4.0</b>        | 4.9  | -0.9  | <b>*n.m.</b> | 4.42  | 3.62  | -                           | 1.82  | 1.85  | 1.16  | -     |
| 2016                   | 216,389         | 0.885  | 1111       | 3.4 | 341 | 14   | <b>10.4</b>       | 10.9 | -0.5  | <b>-5%</b>   | 10.40 | 9.87  | 7.43                        | 0.54  | 0.63  | 0.51  | 0.39  |
| 2015                   | 59,923          | 0.704  | 301        | 3.5 | 327 | 28   | <b>13.8</b>       | 15.2 | -1.4  | <b>-9%</b>   | 14.42 | 14.79 | 13.02                       | 0.63  | 0.78  | 0.68  | 0.73  |
| 2014                   | 9,073           | 0.599  | 95         | 3.5 | 319 | 35   | <b>14.3</b>       | 15.3 | -1.0  | <b>-6%</b>   | 14.79 | 16.05 | 15.01                       | 0.89  | 1.24  | 0.95  | 1.04  |
| 2013                   | 55,845          | 0.540  | 281        | 3.3 | 299 | 53   | <b>13.7</b>       | 14.2 | -0.5  | <b>-4%</b>   | 13.98 | 14.90 | 13.97                       | 0.80  | 0.92  | 0.89  | 1.02  |
| 2012                   | 53,698          | 0.494  | 283        | 3.4 | 293 | 59   | <b>13.9</b>       | 14.5 | -0.6  | <b>-4%</b>   | 14.25 | 15.12 | 13.98                       | 0.64  | 0.75  | 0.66  | 0.70  |
| 2011                   | 59              | 0.421  | 9          | 3.6 | 279 | 69   | <b>3.6</b>        | 15.7 | -12.2 | <b>-77%</b>  | 11.16 | 14.21 | 14.25                       | 0.00  | 0.00  | 0.47  | 0.23  |
| <b>GNMA 2 30yr 3.5</b> | 606,942         | 0.632  | 9641       | 3.9 | 328 | 6    | <b>14.4</b>       | 15.2 | -0.9  | <b>-6%</b>   | 14.58 | 14.88 | 14.20                       | 1.77  | 1.70  | 1.52  | 1.58  |
| 2017                   | 156,885         | 0.972  | 2032       | 3.9 | 352 | 5    | <b>7.8</b>        | 7.2  | 0.6   | <b>8%</b>    | 6.76  | 5.05  | -                           | 0.84  | 0.84  | 0.61  | -     |
| 2016                   | 134,951         | 0.825  | 3331       | 3.9 | 340 | 16   | <b>15.0</b>       | 16.3 | -1.2  | <b>-8%</b>   | 15.43 | 14.95 | 12.10                       | 2.41  | 2.36  | 2.09  | 1.91  |
| 2015                   | 139,797         | 0.632  | 1864       | 3.9 | 328 | 27   | <b>18.0</b>       | 19.1 | -1.1  | <b>-6%</b>   | 18.29 | 18.04 | 16.41                       | 2.09  | 1.91  | 1.64  | 1.67  |
| 2014                   | 52,534          | 0.465  | 641        | 3.9 | 316 | 38   | <b>17.6</b>       | 18.7 | -1.2  | <b>-6%</b>   | 18.03 | 19.09 | 18.52                       | 1.82  | 1.78  | 1.52  | 1.59  |
| 2013                   | 43,172          | 0.462  | 605        | 3.8 | 299 | 51   | <b>16.2</b>       | 16.6 | -0.3  | <b>-2%</b>   | 16.10 | 16.87 | 16.23                       | 2.19  | 1.79  | 1.63  | 1.79  |
| 2012                   | 66,083          | 0.393  | 900        | 3.8 | 288 | 62   | <b>15.9</b>       | 16.6 | -0.7  | <b>-4%</b>   | 16.04 | 16.98 | 16.16                       | 1.54  | 1.37  | 1.27  | 1.32  |
| 2011                   | 12,689          | 0.340  | 162        | 3.9 | 280 | 70   | <b>15.6</b>       | 16.8 | -1.2  | <b>-7%</b>   | 16.03 | 17.07 | 16.73                       | 1.08  | 1.19  | 1.07  | 1.09  |
| 2010                   | 810             | 0.303  | 79         | 4.0 | 267 | 81   | <b>13.8</b>       | 14.2 | -0.4  | <b>-3%</b>   | 15.16 | 16.44 | 16.37                       | 1.21  | 1.33  | 1.06  | 1.43  |
| <b>GNMA 2 30yr 4</b>   | 251,567         | 0.480  | 12334      | 4.4 | 324 | 13   | <b>20.3</b>       | 19.3 | 1.0   | <b>5%</b>    | 18.98 | 18.30 | 18.83                       | 3.14  | 2.76  | 2.45  | 2.73  |
| 2017                   | 76,124          | 0.961  | 4382       | 4.4 | 352 | 10   | <b>16.7</b>       | 9.9  | 6.9   | <b>69%</b>   | 10.94 | 7.24  | -                           | 1.80  | 1.30  | 0.77  | -     |
| 2016                   | 27,557          | 0.773  | 2765       | 4.4 | 342 | 13   | <b>28.6</b>       | 34.3 | -5.7  | <b>-17%</b>  | 30.89 | 26.70 | 20.38                       | 4.14  | 3.45  | 3.06  | 2.70  |
| 2015                   | 40,519          | 0.570  | 2371       | 4.4 | 329 | 25   | <b>21.9</b>       | 21.7 | 0.3   | <b>1%</b>    | 21.24 | 20.88 | 21.70                       | 4.42  | 3.77  | 3.31  | 3.38  |
| 2014                   | 44,370          | 0.385  | 1293       | 4.3 | 313 | 38   | <b>21.3</b>       | 20.3 | 0.9   | <b>5%</b>    | 20.49 | 20.74 | 20.95                       | 4.23  | 4.01  | 3.50  | 3.76  |
| 2013                   | 21,928          | 0.331  | 316        | 4.4 | 304 | 47   | <b>20.8</b>       | 21.0 | -0.2  | <b>-1%</b>   | 20.41 | 20.71 | 20.94                       | 2.88  | 2.52  | 2.34  | 2.43  |
| 2012                   | 9,653           | 0.310  | 439        | 4.3 | 285 | 63   | <b>17.9</b>       | 18.3 | -0.4  | <b>-2%</b>   | 17.47 | 17.93 | 17.49                       | 3.41  | 3.01  | 2.70  | 2.88  |
| 2011                   | 17,399          | 0.247  | 449        | 4.3 | 278 | 74   | <b>18.6</b>       | 18.6 | -0.1  | <b>0%</b>    | 18.09 | 18.98 | 18.94                       | 2.23  | 2.05  | 1.78  | 1.93  |
| 2010                   | 13,325          | 0.256  | 271        | 4.4 | 267 | 84   | <b>17.4</b>       | 18.5 | -1.0  | <b>-6%</b>   | 17.84 | 18.29 | 18.19                       | 1.75  | 1.58  | 1.42  | 1.47  |
| 2009                   | 633             | 0.213  | 19         | 4.4 | 251 | 97   | <b>20.7</b>       | 18.4 | 2.3   | <b>13%</b>   | 19.16 | 18.98 | 19.20                       | 1.44  | 1.41  | 1.39  | 1.36  |
| <b>GNMA 2 30yr 4.5</b> | 80,994          | 0.271  | 5512       | 4.9 | 293 | 21   | <b>22.5</b>       | 20.8 | 1.6   | <b>8%</b>    | 20.75 | 20.41 | 20.64                       | 3.52  | 3.09  | 2.79  | 3.06  |
| 2017                   | 11,602          | 0.978  | 1929       | 4.9 | 351 | 13   | <b>8.3</b>        | 6.9  | 1.4   | <b>21%</b>   | 6.64  | 4.47  | -                           | 1.24  | 0.69  | 0.41  | -     |
| 2016                   | 6,110           | 0.819  | 488        | 4.9 | 343 | 14   | <b>51.0</b>       | 40.5 | 10.5  | <b>26%</b>   | 40.36 | 28.50 | 19.69                       | 5.22  | 4.62  | 3.28  | 2.21  |
| 2015                   | 1,702           | 0.667  | 860        | 4.8 | 325 | 25   | <b>25.4</b>       | 21.7 | 3.7   | <b>17%</b>   | 23.55 | 25.02 | 21.13                       | 5.70  | 4.96  | 4.48  | 3.97  |
| 2014                   | 8,416           | 0.396  | 574        | 4.8 | 311 | 39   | <b>25.9</b>       | 23.3 | 2.6   | <b>11%</b>   | 23.75 | 23.51 | 24.88                       | 6.59  | 5.68  | 5.17  | 5.78  |
| 2013                   | 9,955           | 0.333  | 177        | 4.8 | 303 | 46   | <b>22.9</b>       | 21.4 | 1.4   | <b>7%</b>    | 21.23 | 22.37 | 22.77                       | 5.03  | 4.50  | 4.14  | 4.59  |
| 2012                   | 534             | 0.334  | 42         | 4.9 | 290 | 54   | <b>26.1</b>       | 26.9 | -0.8  | <b>-3%</b>   | 25.77 | 26.45 | 27.34                       | 9.31  | 8.28  | 7.09  | 8.00  |
| 2011                   | 15,779          | 0.204  | 549        | 4.8 | 273 | 78   | <b>20.0</b>       | 19.8 | 0.2   | <b>1%</b>    | 19.54 | 19.87 | 19.89                       | 3.28  | 2.70  | 2.42  | 2.52  |
| 2010                   | 15,465          | 0.204  | 453        | 4.9 | 264 | 88   | <b>19.0</b>       | 19.4 | -0.4  | <b>-2%</b>   | 19.12 | 19.89 | 19.77                       | 2.39  | 2.10  | 1.91  | 2.00  |
| 2009                   | 11,073          | 0.164  | 145        | 4.9 | 252 | 98   | <b>20.7</b>       | 19.6 | 1.1   | <b>5%</b>    | 19.80 | 20.27 | 20.35                       | 1.96  | 1.91  | 1.75  | 1.86  |
| 2008                   | 68              | 0.089  | 23         | 5.0 | 240 | 112  | <b>24.0</b>       | 16.9 | 7.1   | <b>42%</b>   | 21.72 | 20.97 | 21.41                       | 1.98  | 2.23  | 1.96  | 2.88  |
| <b>GNMA 2 30yr 5</b>   | 31,263          | 0.148  | 1682       | 5.4 | 258 | 79   | <b>20.5</b>       | 20.7 | -0.2  | <b>-1%</b>   | 20.00 | 20.51 | 21.06                       | 4.56  | 3.80  | 3.55  | 3.72  |
| 2017                   | 208             | 0.979  | 106        | 5.3 | 355 | 104  | <b>10.2</b>       | 7.0  | 3.2   | <b>46%</b>   | 7.22  | 4.33  | -                           | 0.00  | 0.00  | 0.37  | -     |
| 2015                   | 1,146           | 0.974  | 12         | 5.4 | 331 | 27   | <b>11.7</b>       | 8.3  | 3.5   | <b>42%</b>   | 8.59  | 8.53  | 12.57                       | 4.70  | 2.24  | 1.13  | 1.57  |
| 2014                   | 492             | 0.867  | 27         | 5.3 | 320 | 35   | <b>37.8</b>       | 20.6 | 17.2  | <b>83%</b>   | 26.91 | 19.65 | 19.25                       | 14.05 | 12.58 | 6.98  | 5.56  |
| 2013                   | 183             | 0.722  | 32         | 5.3 | 309 | 45   | <b>58.0</b>       | 36.6 | 21.4  | <b>58%</b>   | 42.60 | 33.96 | 25.33                       | 14.47 | 16.18 | 14.30 | 8.70  |
| 2012                   | 303             | 0.352  | 4          | 5.4 | 286 | 62   | <b>38.7</b>       | 40.3 | -1.7  | <b>-4%</b>   | 35.42 | 31.62 | 27.12                       | 16.16 | 14.59 | 13.66 | 10.92 |
| 2011                   | 2,798           | 0.231  | 195        | 5.3 | 273 | 76   | <b>22.1</b>       | 25.5 | -3.4  | <b>-13%</b>  | 23.13 | 23.16 | 24.13                       | 8.23  | 6.53  | 6.15  | 6.90  |
| 2010                   | 10,891          | 0.178  | 282        | 5.3 | 262 | 88   | <b>20.2</b>       | 20.7 | -0.5  | <b>-2%</b>   | 19.71 | 20.49 | 20.91                       | 4.66  | 3.78  | 3.60  | 3.84  |
| 2009                   | 11,919          | 0.139  | 253        | 5.3 | 254 | 97   | <b>20.2</b>       | 20.6 | -0.4  | <b>-2%</b>   | 20.04 | 20.73 | 21.40                       | 3.16  | 2.68  | 2.62  | 2.85  |
| 2008                   | 766             | 0.074  | 84         | 5.5 | 240 | 109  | <b>19.3</b>       | 21.1 | -1.9  | <b>-9%</b>   | 20.60 | 21.63 | 22.41                       | 4.30  | 4.16  | 3.98  | 4.11  |
| <b>GNMA 2 30yr 5.5</b> | 10,631          | 0.070  | 2359       | 6.0 | 216 | 110  | <b>18.1</b>       | 19.4 | -1.3  | <b>-7%</b>   | 18.37 | 18.52 | 19.16                       | 4.89  | 4.43  | 4.06  | 4.36  |
| 2010                   | 198             | 0.481  | 19         | 5.9 | 261 | 89   | <b>20.5</b>       | 22.1 | -1.5  | <b>-7%</b>   | 19.30 | 16.29 | 17.36                       | 15.34 | 10.54 | 5.87  | 4.85  |
| 2009                   | 1,527           | 0.141  | 106        | 5.9 | 251 | 98   | <b>20.8</b>       | 23.2 | -2.4  | <b>-10%</b>  | 20.39 | 19.82 | 20.17                       | 5.86  | 5.51  | 4.85  | 4.62  |
| 2008                   | 2,534           | 0.056  | 345        | 6.0 | 238 | 112  | <b>20.0</b>       | 19.8 | 0.2   | <b>1%</b>    | 20.48 | 20.57 | 21.77                       | 4.31  | 4.07  | 3.85  | 4.35  |
| 2007                   | 1,135           | 0.097  | 375        | 6.0 | 226 | 118  | <b>22.6</b>       | 23.0 | -0.4  | <b>-2%</b>   | 22.29 | 22.45 | 23.22                       | 8.73  | 8.    |       |       |

# GNMA Prepayment Speeds

November 2017

GNMA2 JUMBO 15yr/30yr

|                         | Indicative Data |        |            |     |     |      | Prepayment Speeds |      |       |              |       |       |       | Buyout Prepayment Component |      |      |      |
|-------------------------|-----------------|--------|------------|-----|-----|------|-------------------|------|-------|--------------|-------|-------|-------|-----------------------------|------|------|------|
|                         | Cur Bal (MM)    | Factor | # of Pools | WAC | WAM | WALA | Nov               | Oct  | Chg   | % Chg        | 3mo   | 6mo   | 12mo  | 1mo                         | 3mo  | 6mo  | 12mo |
| <b>GNMA 2 Jumbo 2.5</b> | 418             | 0.749  | 99         | 2.9 | 252 | 108  | <b>7.1</b>        | 8.4  | -1.4  | <b>-16%</b>  | 7.42  | 9.15  | 7.87  | 0.00                        | 0.00 | 0.00 | 0.00 |
| 2017                    | 28              | 0.965  | 14         | 3.0 | 258 | 102  | <b>0.2</b>        | 17.4 | -17.2 | <b>*n.m.</b> | 6.92  | 3.65  | -     | 0.00                        | 0.00 | 0.00 | -    |
| 2016                    | 214             | 0.888  | 24         | 2.9 | 270 | 90   | <b>7.9</b>        | 7.8  | 0.1   | <b>1%</b>    | 6.71  | 8.26  | 6.37  | 0.00                        | 0.00 | 0.00 | 0.00 |
| 2015                    | 33              | 0.573  | 15         | 2.9 | 160 | 200  | <b>28.0</b>       | 5.8  | 22.3  | <b>387%</b>  | 21.42 | 18.52 | 19.24 | 0.00                        | 0.00 | 0.00 | 0.00 |
| 2013                    | 44              | 0.572  | 21         | 3.0 | 230 | 130  | <b>0.4</b>        | 11.1 | -10.7 | <b>*n.m.</b> | 4.11  | 8.72  | 9.00  | 0.00                        | 0.00 | 0.00 | 0.00 |
| 2012                    | 90              | 0.639  | 17         | 3.0 | 254 | 106  | <b>1.4</b>        | 7.4  | -6.0  | <b>-81%</b>  | 5.58  | 9.53  | 6.54  | 0.00                        | 0.00 | 0.00 | 0.00 |
| <b>GNMA 2 Jumbo 3</b>   | 23,918          | 0.739  | 143        | 3.4 | 335 | 25   | <b>12.7</b>       | 13.1 | -0.4  | <b>-3%</b>   | 12.85 | 13.04 | 10.77 | 0.10                        | 0.12 | 0.14 | 0.14 |
| 2017                    | 2,355           | 0.978  | 17         | 3.5 | 352 | 8    | <b>6.4</b>        | 6.0  | 0.4   | <b>7%</b>    | 5.90  | 4.12  | -     | 0.29                        | 0.31 | 0.16 | -    |
| 2016                    | 15,361          | 0.855  | 23         | 3.4 | 342 | 18   | <b>13.1</b>       | 12.8 | 0.3   | <b>2%</b>    | 12.95 | 12.64 | 9.46  | 0.09                        | 0.05 | 0.10 | 0.09 |
| 2015                    | 3,214           | 0.606  | 22         | 3.4 | 325 | 35   | <b>15.9</b>       | 18.8 | -2.9  | <b>-16%</b>  | 15.99 | 16.74 | 15.29 | 0.15                        | 0.17 | 0.16 | 0.25 |
| 2014                    | 365             | 0.478  | 17         | 3.4 | 314 | 46   | <b>14.6</b>       | 6.6  | 8.0   | <b>122%</b>  | 14.51 | 15.07 | 15.71 | 0.00                        | 0.00 | 0.00 | 0.00 |
| 2013                    | 1,340           | 0.467  | 24         | 3.3 | 298 | 62   | <b>12.0</b>       | 13.0 | -1.0  | <b>-8%</b>   | 12.88 | 14.05 | 13.72 | 0.00                        | 0.45 | 0.28 | 0.28 |
| 2012                    | 1,268           | 0.426  | 26         | 3.4 | 280 | 60   | <b>11.6</b>       | 13.8 | -2.2  | <b>-16%</b>  | 12.81 | 14.77 | 13.61 | 0.00                        | 0.16 | 0.39 | 0.28 |
| <b>GNMA 2 Jumbo 3.5</b> | 23,103          | 0.541  | 135        | 3.9 | 337 | 6    | <b>17.9</b>       | 21.2 | -3.3  | <b>-16%</b>  | 19.32 | 19.38 | 19.02 | 0.46                        | 0.62 | 0.62 | 0.56 |
| 2017                    | 8,976           | 0.950  | 18         | 3.9 | 354 | 6    | <b>15.3</b>       | 15.0 | 0.2   | <b>2%</b>    | 14.14 | 10.17 | -     | 0.09                        | 0.22 | 0.19 | -    |
| 2016                    | 4,868           | 0.721  | 16         | 3.9 | 342 | 18   | <b>16.7</b>       | 24.0 | -7.2  | <b>-30%</b>  | 21.07 | 22.15 | 19.12 | 1.35                        | 1.13 | 0.89 | 0.59 |
| 2015                    | 5,423           | 0.454  | 21         | 3.9 | 330 | 1    | <b>22.9</b>       | 27.9 | -5.1  | <b>-18%</b>  | 24.79 | 24.65 | 23.29 | 0.29                        | 0.73 | 0.83 | 0.75 |
| 2014                    | 1,303           | 0.267  | 19         | 3.8 | 318 | 27   | <b>23.4</b>       | 22.6 | 0.8   | <b>4%</b>    | 22.92 | 22.36 | 22.64 | 0.36                        | 0.24 | 0.37 | 0.36 |
| 2013                    | 690             | 0.282  | 20         | 3.8 | 299 | 61   | <b>18.0</b>       | 11.3 | 6.8   | <b>60%</b>   | 15.80 | 19.17 | 20.74 | 0.00                        | 0.97 | 0.92 | 0.89 |
| 2012                    | 1,668           | 0.261  | 18         | 3.8 | 288 | 64   | <b>13.7</b>       | 20.8 | -7.1  | <b>-34%</b>  | 17.32 | 19.16 | 18.48 | 0.40                        | 0.52 | 0.57 | 0.59 |
| 2011                    | 164             | 0.221  | 16         | 3.9 | 272 | 2    | <b>11.2</b>       | 22.8 | -11.6 | <b>-51%</b>  | 15.69 | 17.85 | 19.82 | 0.00                        | 0.00 | 0.00 | 0.19 |
| <b>GNMA 2 Jumbo 4</b>   | 4,955           | 0.308  | 112        | 4.4 | 335 | 9    | <b>30.6</b>       | 28.5 | 2.1   | <b>7%</b>    | 28.58 | 26.12 | 28.10 | 1.36                        | 1.71 | 1.37 | 1.52 |
| 2017                    | 2,675           | 0.903  | 10         | 4.4 | 354 | 6    | <b>32.3</b>       | 28.5 | 3.8   | <b>13%</b>   | 27.52 | 19.28 | -     | 0.43                        | 0.14 | 0.12 | -    |
| 2016                    | 512             | 0.495  | 11         | 4.4 | 342 | 18   | <b>32.2</b>       | 35.3 | -3.1  | <b>-9%</b>   | 36.91 | 41.52 | 39.20 | 2.86                        | 5.10 | 3.38 | 2.54 |
| 2015                    | 644             | 0.284  | 12         | 4.4 | 331 | 29   | <b>29.7</b>       | 33.4 | -3.7  | <b>-11%</b>  | 31.55 | 29.75 | 32.98 | 2.60                        | 3.13 | 2.58 | 2.20 |
| 2014                    | 340             | 0.115  | 14         | 4.3 | 316 | 44   | <b>42.2</b>       | 28.7 | 13.5  | <b>47%</b>   | 34.64 | 32.58 | 33.60 | 1.78                        | 3.04 | 2.57 | 2.85 |
| 2013                    | 87              | 0.089  | 7          | 4.4 | 306 | 2    | <b>26.3</b>       | 39.0 | -12.7 | <b>-33%</b>  | 33.10 | 28.90 | 33.43 | 6.51                        | 3.56 | 2.76 | 2.13 |
| 2012                    | 125             | 0.129  | 14         | 4.3 | 287 | 66   | <b>12.3</b>       | 8.4  | 3.9   | <b>46%</b>   | 12.03 | 16.20 | 18.54 | 4.17                        | 3.27 | 2.26 | 2.35 |
| 2011                    | 206             | 0.097  | 19         | 4.3 | 276 | 36   | <b>19.9</b>       | 17.4 | 2.6   | <b>15%</b>   | 17.07 | 19.14 | 23.32 | 0.00                        | 1.50 | 0.75 | 0.91 |
| 2010                    | 352             | 0.131  | 16         | 4.4 | 267 | 84   | <b>16.3</b>       | 17.3 | -1.0  | <b>-6%</b>   | 19.98 | 21.98 | 21.59 | 1.47                        | 1.07 | 0.75 | 0.66 |
| <b>GNMA 2 Jumbo 4.5</b> | 616             | 0.116  | 94         | 4.9 | 305 | 55   | <b>25.0</b>       | 24.6 | 0.4   | <b>1%</b>    | 23.20 | 24.93 | 28.49 | 3.24                        | 2.01 | 1.70 | 2.33 |
| 2017                    | 181             | 0.932  | 7          | 4.9 | 354 | 6    | <b>27.1</b>       | 10.1 | 17.0  | <b>169%</b>  | 16.69 | 17.74 | -     | 0.00                        | 0.00 | 0.00 | -    |
| 2016                    | 35              | 0.593  | 6          | 4.9 | 346 | 14   | <b>44.1</b>       | 50.8 | -6.7  | <b>-13%</b>  | 43.47 | 39.51 | 45.81 | 12.33                       | 4.29 | 5.01 | 5.35 |
| 2015                    | 29              | 0.191  | 14         | 4.9 | 332 | 28   | <b>23.4</b>       | 52.4 | -29.0 | <b>-55%</b>  | 40.17 | 36.01 | 41.92 | 0.00                        | 5.80 | 2.94 | 4.14 |
| 2014                    | 45              | 0.105  | 13         | 4.8 | 315 | 45   | <b>22.7</b>       | 11.5 | 11.2  | <b>97%</b>   | 22.41 | 30.16 | 33.64 | 0.00                        | 0.00 | 0.00 | 0.93 |
| 2013                    | 28              | 0.063  | 8          | 4.8 | 307 | 53   | <b>0.1</b>        | 28.8 | -28.8 | <b>*n.m.</b> | 16.35 | 30.10 | 32.22 | 0.00                        | 0.00 | 7.02 | 6.09 |
| 2011                    | 104             | 0.064  | 18         | 4.8 | 271 | 43   | <b>30.6</b>       | 31.5 | -0.9  | <b>-3%</b>   | 27.16 | 26.58 | 27.09 | 4.27                        | 1.44 | 0.72 | 1.28 |
| 2010                    | 166             | 0.090  | 16         | 4.9 | 267 | 86   | <b>9.7</b>        | 22.9 | -13.2 | <b>-58%</b>  | 16.71 | 19.03 | 23.30 | 5.95                        | 2.90 | 1.55 | 2.15 |
| <b>GNMA 2 Jumbo 5</b>   | 132             | 0.052  | 61         | 5.4 | 272 | 20   | <b>14.0</b>       | 29.4 | -15.4 | <b>-52%</b>  | 24.84 | 25.06 | 27.55 | 4.87                        | 1.65 | 2.93 | 2.24 |
| 2010                    | 48              | 0.056  | 11         | 5.4 | 265 | 55   | <b>0.5</b>        | 38.6 | -38.1 | <b>*n.m.</b> | 20.80 | 22.12 | 24.17 | 0.00                        | 0.00 | 1.66 | 1.53 |
| 2009                    | 43              | 0.039  | 16         | 5.4 | 255 | 93   | <b>20.6</b>       | 12.3 | 8.3   | <b>68%</b>   | 23.96 | 25.56 | 30.26 | 0.00                        | 0.00 | 2.04 | 1.59 |

\*n.m. - Not Meaningful

Source: Bloomberg

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