First Quarter Changes in Interest Rates

U.S. Treasury rates increased across all maturities during the first quarter of 2009, with intermediate and long-term rates increasing more than short-term rates, resulting in a considerably steepened yield curve (see Exhibit–1). The three-month and one-year Treasury rates increased by 10 basis points and 20 basis points to 0.21% and 0.57%, respectively; while the 10-year and 30-year Treasury rates increased by 46 basis points and 87 basis points to 2.71% and 3.56%, respectively. The spread between the two-year and 10-year rates, a measure of yield curve steepness, increased by 41 basis points to 190 basis points in the first quarter. The steepening of the yield curve was driven in part by the decision of the Federal Reserve to maintain the target for the federal funds rate within a range of 0-0.25%. This decision served to anchor the short end of the yield curve and helped to fuel inflation fears, as investors demanded extra yield on longer-term Treasuries to compensate for the increased risk of inflation. Additionally, with budget deficits currently projected to reach record levels for fiscal year 2009 and beyond, an increase in the supply of Treasury securities will inevitably be needed to help finance new and current government spending. This also served to increase yields across all maturities and contributed to steepening of the yield curve.

Changes in the LIBOR/Swap curve between the fourth quarter of 2008 and the first quarter of 2009 were mixed (see Exhibit–2). The one-month LIBOR rate rose by six basis points to 0.50%, while the three-month LIBOR rate fell by 24 basis points to 1.19%. The two-year swap rate decreased by eight basis points to 1.38%, while the 10-year swap rate
swap rate increased by 39 basis points to 2.88%. The spread between the two-year and 10-year swap rates increased to 150 basis points, up from 103 basis points in the previous quarter. At the short end of the curve, the decline of the three-month LIBOR rate largely reflected the improvement of short term credit market conditions since financial markets collapsed last fall. At the long end, the rise in the 10-year swap rate is indicative of increased expectations for a steepening Treasury curve.

The Mortgage Market and NPV Model Results

In the first quarter of 2009, the Federal Reserve bought $302.8 (net) billion of agency mortgage-backed securities as part of its Agency MBS Purchase Program (with the intention of buying $1.25 trillion by the end of the year), helping to increase the value of fixed-rate mortgages from the level in the previous quarter. As shown in Exhibit–3, for example, the price of a FNMA 5% coupon TBA MBS rose from $102.28 in the fourth quarter of 2008 to $103.22 in the first quarter of 2009. Accordingly, the rise in mortgage prices lowered the Fannie Mae 60-day commitment rate on a 30-year, fixed rate mortgage to 4.40%, a decrease of nine basis points.

Typically, a decline in mortgage rates would imply faster projected prepayment speeds and shorter average lives for mortgage loans, as borrowers are...
more likely to prepay their loans in a lower interest rate environment. However, results from the NPV Model did not bear that out. The NPV Model actually produced slower projected CPR rates and longer weighted average lives for all securities across the coupon stack for the March 2009 cycle. These results reflect in part a small adjustment that was made recently to the process for projecting future mortgage rates in the NPV Model’s single-family, mortgage valuation routine. Specifically, the spread that is added to the five-year Treasury rate used to simulate the future path of mortgage rates within the valuation routine was increased. The use of a wider spread appears to reflect more appropriately the current relationship between mortgage rates and the five-year Treasury rate. Thus, all things being equal, higher future mortgage rates will decrease the refinance incentive for borrowers and slow down prepayment speeds. To provide a better understanding of the impact of the modeling change, OTS examined the same mortgage loan using the two different spread assumptions and found that the wider spread produced a 5% reduction in CPR and a 7% increase in weighted average life.

With MBS price support coming from MBS purchases by the Federal Reserve and risk appetite slowly returning to the market, option adjusted spreads decreased significantly in the first quarter. This decrease more than offset the effects of rising interest rates to produce higher pre- and post-shock NPV values and lower effective asset duration compared to the previous quarter. During the first quarter, the median pre-shock NPV capital ratio for the industry rose from 11.35% to 12.11%, an increase of 76 basis points. Similarly, the median post-shock NPV capital ratio for the industry rose from 10.40% to 11.22%, an increase of 82 basis points (see Exhibit–4). The median effective duration of assets decreased slightly between December 2008 and March 2009, falling from 1.30 to 1.24; while the median effective duration of liabilities increased slightly from 1.40 to 1.43. As a result, the median effective duration gap changed from -0.10 in December to -0.19 in March, indicating the large extent to which the industry is more adversely exposed to a downward shift in interest rates (see Exhibit – 5). The median sensitivity measure for the industry fell to 68 basis points in the first quarter, down from 81 basis points in December. (see Exhibit-6).

From a supervisory standpoint, the overall interest rate risk profile of the industry improved from the previous quarter. An increase in pre-shock NPV capital and a decrease in sensitivity helped to reduce the number of thrifts with post-shock NPV capital levels below 4% from 23 in December to 14 in March. The number of institutions with a “significant” or “high” level of interest rate risk as defined by TB-13a also decreased, falling from 23 to 11 (see Exhibit—7). Continuing the trend from
last quarter, the number of thrift institutions with sensitivity measures above 200 basis points fell from 92 in December to 59 in March, representing 8% of the industry.

It is important to note, however, that the results for the sensitivity and pre-shock NPV capital ratio may be inaccurate for some institutions. Because the NPV model assumes all mortgage loans to be prime, agency conforming exposures, the sensitivity measure for some institutions may not reflect their true exposure to changes in interest rates if they hold a large amount of non-conforming loans. Indeed, while agency-conforming loan prepayment speeds increased considerably throughout the first quarter, non-conforming borrowers continue to have difficulty obtaining credit despite persistently low mortgage rates and new government initiatives. Prepayment speeds for such non-conforming loans have increased slightly since December 2008, but remain well below their historical rates and significantly lag their agency-conforming counterparts. Additionally, given that market prices for such non-conforming loans are currently well below par, the pre-shock NPV capital ratios for these institutions may be overstated. As a result, it is important to interpret these supervisory results with a degree of caution.
Regional Restructuring Note: On March 16, 2009 OTS announced that it would realign its regional supervisory structure. Under the plan, the Central Region expanded its oversight to include thrifts in Minnesota, Iowa, Nebraska, South Dakota and North Dakota. Additionally, all of the former West Region thrifts and much of the Midwest Region thrifts combined to form the Western Region. This realignment will result in inconsistencies when comparing regional IRR data from March 2009 to previous quarters. Additional information on the regional restructuring can be found in CEO Memo 294.
Appendix B — Northeast Region

Sensitivity Measure Distribution
Northeast

Pre-Shock NPV Ratio Distribution
Northeast

Post-Shock NPV Distribution
Northeast

Asset Duration Distribution
Northeast

Liabilities Duration Distribution
Northeast

Descriptive Statistics
Median = 93
Mean = 111
Standard Deviation = 70
Skewness = 1.16
Kurtosis = 1.42
Maximum = 396
Minimum = 0

Descriptive Statistics
Median = 12.14
Mean = 13.6
Standard Deviation = 5.45
Skewness = 1.94
Kurtosis = 6.83
Maximum = 45.084
Minimum = 4.849
Count = 165

Descriptive Statistics
Median = 11.18
Mean = 12.49
Standard Deviation = 5.37
Skewness = 1.88
Kurtosis = 6.54
Maximum = 43.122
Minimum = 2.259
Count = 165

Descriptive Statistics
Median = 1.4
Mean = 1.44
Standard Deviation = 0.47
Skewness = -0.38
Kurtosis = 0.36
Maximum = 2.48
Minimum = 0.081
Count = 165

Descriptive Statistics
Median = 1.53
Mean = 1.57
Standard Deviation = 0.52
Skewness = 3
Kurtosis = 19.77
Maximum = 5.507
Minimum = 0.272
Count = 165
Appendix C — Southeast Region

Sensitivity Measure Distribution
Southeast

Descriptive Statistics
Median = 64
Mean = 92
Standard Deviation = 91
Skewness = 3.23
Kurtosis = 17.34
Maximum = 761
Minimum = 0
Count = 181

Pre-Shock NPV Ratio Distribution
Southeast

Descriptive Statistics
Median = 12.00
Mean = 14.02
Standard Deviation = 9.54
Skewness = 4.53
Kurtosis = 30.70
Maximum = 86.337
Minimum = -3.768
Count = 181

Asset Duration Distribution
Southeast

Descriptive Statistics
Median = 1.14
Mean = 1.21
Standard Deviation = 0.51
Skewness = 2.2
Kurtosis = 11.33
Maximum = 4.647
Minimum = 0.261
Count = 181

Post-Shock NPV Distribution
Southeast

Descriptive Statistics
Median = 11.07
Mean = 13.11
Standard Deviation = 9.59
Skewness = 4.51
Kurtosis = 30.94
Maximum = 86.097
Minimum = -6.244
Count = 181

Liabilities Duration Distribution
Southeast

Descriptive Statistics
Median = 1.28
Mean = 1.28
Standard Deviation = 0.45
Skewness = 0.27
Kurtosis = 0.52
Maximum = 2.907
Minimum = 0.076
Count = 181
Appendix D — Central Region

### Sensitivity Measure Distribution

**Central**

**Percent of Thrifts**

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<th>133</th>
<th>166</th>
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<th>233</th>
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<th>300</th>
<th>333</th>
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<th>400</th>
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</table>

**Descriptive Statistics**

- Median = 66
- Mean = 84
- Standard Deviation = 83
- Skewness = 4.23
- Kurtosis = 26.04
- Maximum = 774
- Minimum = 0
- Count = 247

### Pre-Shock NPV Ratio Distribution

**Central**

**Percent of Thrifts**

| NPV Ratio (Percent) | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24  | 25  | 26  | 27  |
|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                     | 0   | 18 | 0   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   |

**Descriptive Statistics**

- Median = 11.98
- Mean = 14.2
- Standard Deviation = 9.24
- Skewness = 5.28
- Kurtosis = 38.52
- Maximum = 91.731
- Minimum = 0.601
- Count = 247

### Post-Shock NPV Distribution

**Central**

**Percent of Thrifts**

| NPV Ratio (Percent) | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24  | 25  | 26  | 27  |
|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                     | 0   | 18 | 0   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 2   | 1   |

**Descriptive Statistics**

- Median = 11.23
- Mean = 13.37
- Standard Deviation = 9.22
- Skewness = 5.39
- Kurtosis = 39.73
- Maximum = 91.425
- Minimum = 0.601
- Count = 247

### Asset Duration Distribution

**Central**

**Percent of Thrifts**

<table>
<thead>
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<th>0.75</th>
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<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
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</tbody>
</table>

**Descriptive Statistics**

- Median = 1.24
- Mean = 1.29
- Standard Deviation = 0.45
- Skewness = 0.96
- Kurtosis = 3.17
- Maximum = 3.393
- Minimum = -0.244
- Count = 247

### Liabilities Duration Distribution

**Central**

**Percent of Thrifts**

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<thead>
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<th>1.25</th>
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<th>1.75</th>
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<th>2.25</th>
<th>2.5</th>
<th>More</th>
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<td>0</td>
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<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Descriptive Statistics**

- Median = 1.46
- Mean = 1.46
- Standard Deviation = 0.39
- Skewness = -0.22
- Kurtosis = 0.84
- Maximum = 2.558
- Minimum = 0.003
- Count = 247
Appendix F — Western Region

Sensitivity Measure Distribution

Western

Descriptive Statistics
Median = 60
Mean = 80
Standard Deviation = 66
Skewness = 1.5
Kurtosis = 2.43
Maximum = 369
Minimum = 0
Count = 165

Pre-Shock NPV Ratio Distribution

Western

Descriptive Statistics
Median = 12.46
Mean = 16.05
Standard Deviation = 13.75
Skewness = 3.81
Kurtosis = 16.23
Maximum = 95.661
Minimum = 0.802
Count = 165

Post-Shock NPV Distribution

Western

Descriptive Statistics
Median = 11.48
Mean = 15.26
Standard Deviation = 13.79
Skewness = 3.86
Kurtosis = 16.57
Maximum = 95.476
Minimum = 0.802
Count = 165

Asset Duration Distribution

Western

Descriptive Statistics
Median = 1.17
Mean = 1.17
Standard Deviation = 0.5
Skewness = -0.31
Kurtosis = 3.49
Maximum = 2.815
Minimum = -1.336
Count = 165

Liabilities Duration Distribution

Western

Descriptive Statistics
Median = 1.4
Mean = 1.39
Standard Deviation = 0.48
Skewness = 0.18
Kurtosis = 1.43
Maximum = 3.271
Minimum = 0.12
Count = 165