

| 1 Classify based on | | | Cutoff | Misclas- |
|------------------------------------|-----|-----|--------|----------|
| General obligation debt per capita | | | below | sified |
| East Cleveland | 32 | A | 36.5 | 5 |
| Franklin, Texas | 41 | A | 46.5 | 4 |
| Fresno | 52 | Aa | 57.0 | 3 Best |
| Hamtramck, Mich | 62 | Baa | 81.0 | 4 |
| Crowley., LA | 100 | Baa | 114.0 | 5 |
| Vicksburg, Miss | 128 | Baa | 136.0 | 6 |
| Great Bend, Kan | 144 | Baa | 150.5 | 7 |
| Franklin, PA | 157 | Baa | 158.5 | 8 |
| Rome, GA | 160 | A | 176.0 | 7 |
| Austin | 192 | Aa | 229.0 | 6 |
| Corpus Christi | 266 | Aa | 313.0 | 5 |
| Midfield, Ala | 360 | Baa | 180.0 | 6 |

| | | Actual outcome | |
|-------------------|--|----------------|--------|
| Predicted outcome | | A or Aa | Baa |
| A or Aa | | 3 | Type I |
| Baa | | 3 | 6 |
| | | Type II | |

| Classify based on | | | Cutoff | Misclas- |
|---------------------------------------|------|-----|---------|----------|
| Assessed property valuation per capit | | | below | sified |
| Austin | 5905 | Aa | 5,315.0 | 5 |
| Hamtramc, Mich | 4725 | Baa | 4,620.0 | 6 |
| Rome, GA | 4515 | A | 4,351.5 | 5 |
| Corpus Christi | 4188 | Aa | 3,599.5 | 4 |
| Fresno | 3011 | Aa | 2,804.0 | 3 Best |
| Great Bend, Kan | 2597 | Baa | 2,537.5 | 4 |
| Franklin, PA | 2478 | Baa | 2,453.0 | 5 |
| Franklin, Texas | 2428 | A | 2,357.0 | 4 |
| East Cleveland | 2286 | A | 2,211.5 | 3 Best |
| Vicksburg, Miss | 2137 | Baa | 1,894.5 | 4 |
| Midfield, ALA | 1652 | Baa | 1,261.0 | 5 |
| Crowley., LA | 870 | Baa | 435.0 | 6 |

| | | Actual outcome | |
|-------------------|--|----------------|--------|
| Predicted outcome | | A or Aa | Baa |
| A or Aa | | 4 | 1 |
| | | | Type I |
| Baa | | 2 | 5 |
| | | Type II | |

| | | Actual outcome | |
|-------------------|--|----------------|--------|
| Predicted outcome | | A or Aa | Baa |
| A or Aa | | 6 | 3 |
| | | | Type I |
| Baa | | | 3 |
| | | Type II | |

| 2 Classify based on | | | Cutoff | Misclas- |
|---------------------|----------|-----|-----------|----------|
| Z score | | | below | sified |
| Austin | 2.944 | Aa | 2.84915 | 5 |
| Hamtramck, Mich | 2.7543 | Baa | 2.47395 | 6 |
| Rome, GA | 2.1936 | A | 1.94722 | 5 |
| Fresno | 1.70084 | Aa | 1.61203 | 4 |
| Corpus Christi | 1.52322 | Aa | 1.44940 | 3 |
| Franklin, Texas | 1.37557 | A | 1.34971 | 2 |
| East Cleveland | 1.32384 | A | 1.17976 | 1 Best |
| Great Bend, Kan | 1.03568 | Baa | 0.96933 | 2 |
| Franklin, PA | 0.90297 | Baa | 0.85693 | 3 |
| Vicksburg, Miss | 0.81088 | Baa | 0.46634 | 4 |
| Crowley., LA | 0.1218 | Baa | (0.19346) | 5 |
| Midfield, ALA | -0.50872 | Baa | (0.25436) | 6 |

| | | Actual outcome | |
|-------------------|--|----------------|--------|
| Predicted outcome | | A or Aa | Baa |
| A or Aa | | 6 | 1 |
| | | | Type I |
| Baa | | | 5 |
| | | Type II | |

3 The cost of classifying a Baa firm as a Aa firm may be more. The firm is risky and we may loan more based on a Aa prediction. This is type I error. The other cost (essentially opportunity cost) of not lending to a Aa firm when it is classified as Baa firm may be lower. In this situation minimizing the number of misclassifications may not be optimal.

4 Invest in Hamtramc, MI as the bond deserves a better rating. The market yield, which is set based on Moody's rating will be high but the risk is "truly" lower based on our model.