All Risk Adjustment Program (ARAP) Calculation

BUREAU # : 123456   **EFFECTIVE DATE:** 3/1/00

NAME: ABC Co. Inc.   **ISSUE DATE:** 1/1/00

To calculate ARAP, two separate formulas are used. In the first, solve for "R", and in the second solve for "S".
- If R is less than or equal to 1.00, the risk does not qualify for ARAP, and the mod worksheet will display an ARAP factor of 1.00.
- If R is greater than 1.00, then solve for "S", and "S" equals the ARAP Surcharge.
- For ratings effective September 1, 2007 and after, the surcharge factor is limited to a maximum of 1.25. Prior to September 1, 2007, the maximum surcharge was 1.49.

The following information was taken from the experience modification worksheet:

Weighting Value = 0.08   Expected Losses = 53,731
Actual Losses = 58,943   Expected Primary Losses = 18,270
Actual Primary Losses = 56,826   Experience Modification = 1.48

Solve for R:

$$R = \frac{(0.5 - (0.5 * W)) * Ap}{(M * Ep)} + \frac{(0.5 + (0.5 * W)) * A}{(M * E)}$$

$$R = \frac{0.5 - (0.5 * 0.08) * 56,826}{(1.48 * 18,270)} + \frac{(0.5 + (0.5 * 0.08) * 58,943}{(1.48 * 53,731)}$$

$$R = \frac{26,139.9600}{27,039.6000} + \frac{31,829.2200}{79,521.8800} = 0.9667 + 0.4003$$

$$= \mathbf{\textit{1.3670}}$$

Since R > 1, solve for S:

$$S = 1 + \frac{.08 * E * ((R-1)^{1.25})}{(E + 3)^{0.5}}$$ When solving for S:

E is expressed in terms of thousands;

E cannot exceed 40;

$$S = 1 + \frac{.08 * 40 * .3670^{1.25}}{6.5574}$$ R cannot exceed 2;

$$S = 1 + \frac{0.9141}{6.5574} = \mathbf{\textit{1.14}}$$