Solution to Exercise 15.2

Our profit margin is 4.4% since

$$\text{Profit Margin} = \frac{-100v + 50v^2 + 66v^3}{50 + 45v + 40v^2} = 0.04354 \text{ where } v = (1.06)^{-1}.$$

Solution to Exercise 15.3

The spread margin is 68 bp since

$$\text{Spread Margin} = \frac{10v + 50v^2 + 60v^3}{5000 + 5250v + 5512v^2} = 0.00684 \text{ where } v = (1.08)^{-1}.$$