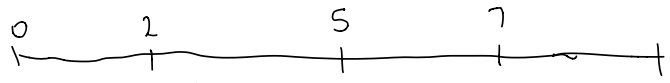

$$a+b = \frac{25000}{(1.05)^5}$$

$$5 = \frac{2a}{a+b} + \frac{7b}{a+b}$$

$$5a+5b = 2a+7b$$

$$3a = 2b$$

$$a = \frac{2}{3}b$$

$$\frac{2}{3}b + b = \frac{25000}{(1.05)^5} = \frac{5}{3}b$$

$a = 78352.616 =$ \$78352.62 2 yr bonds

$b = 117528.925 =$ \$117528.93 7 yr bonds

$$2^2\frac{a}{a+b} + \frac{7^2 b}{a+b} = 2^2\frac{2}{5} + 7^2\frac{3}{5} = 31 > 25 = 5^2$$

convexity condition holds

cont. on next page

$i = 5\%$

78352.62 2yr bonds redeems @ $t=2$ for ≈ 86383.763

117528.93 7yr bonds redeems @ $t=7$ for ≈ 165375.007

250000 5yr liability

@ $t=2$ $i = 1\%$

$$\left(86383.763 + \frac{165375.007}{(1.01)^5}\right)(1.01)^3 = \$251117.74 > 250000$$

$\therefore$ can still cover liability