

EXAM FM QUESTIONS OF THE WEEK

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Question 7 - Week of September 5

A bond is found to have the following amortized values on three consecutive coupon dates (after the coupon is paid): 83,232.31 , 84,226.25 and 85,279.83 .

Find the amortized value on the next coupon date.

The solution can be found below.

Question 7 Solution

We can use the rule $BV_k(1 + j) - Coupon = BV_{k+1}$, where j is the yield rate per coupon period. Using the given values, we have

$$83,232.31(1 + j) - Coupon = 84,226.25 \text{ and}$$

$$84,226.25(1 + j) - Coupon = 85,279.83 .$$

Subtracting the first equation from the second results in

$$993.94(1 + j) = 1053.58 , \text{ and then solving for } j \text{ results in } j = .06 .$$

From the first equation we can now solve for the Coupon, $Coupon = 4000 .$

The amortized value at the next coupon date will be

$$85,279.83(1.06) - 4000 = 86,396.62 .$$