EXAM FM QUESTION OF THE WEEK

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Week of March 24/08

On January 1, 2008, a 20-year coupon bond with face amount \$100 and annual coupons of \$5, payable on December 31 every year, has a price of \$110. The annual effective yield rate on a one-year zero-coupon bond is 4.00% and the annual effective yield rate on a two-year zero-coupon bond is 4.25%. Assuming no arbitrage opportunities are available, find the prepaid forward price and the delivery forward price for a two-year forward contract on the bond, with delivery to take place January 1, 2010.

The solution can be found below.

Week of March 24/08 - Solution

The prepaid forward price is the bond price minus the present value of the income payments up to the time of delivery, so that $F_{0,2}^{P} = 110 - \frac{5}{1.04} - \frac{5}{(1.0425)^2} = 100.59$.

The calue of the forward delivery price is $100.59 \times (1.0425)^2 = 109.32$.