1. Watters Umbrella Corp. issued 15-year bonds 2 years ago at a coupon rate of 8.8 percent. The bonds make semiannual payments. If these bonds currently sell for 109 percent of par value, what is the YTM?

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| 1. Hollin Corporation has bonds on the market with 16.5 years to maturity, a YTM of 6.3 percent, and a current price of $1,036. The bonds make semiannual payments. |
| What must the coupon rate be on these bonds? |
| |  | | --- | | 1. Miller Corporation has a premium bond making semiannual payments. The bond has a coupon rate of 10 percent, a YTM of 8 percent, and 16 years to maturity. The Modigliani Company has a discount bond making semiannual payments. This bond has a coupon rate of 8 percent, a YTM of 10 percent, and also has 16 years to maturity. |      |  | | --- | | What is the price of each bond today? |      |  |  | | --- | --- | |  |  | | Price of Miller bond | $ | | Price of Modigliani bond | $ | |  | |      |  | | --- | | If interest rates remain unchanged, what do you expect the price of these bonds to be 1 year from now? In 7 years? In 11 years? In 15 years? In 16 years? |      |  |  |  | | --- | --- | --- | | Price of bond in: | Miller bond | Modigliani bond | | 1 year | $ | $ | | 7 years | $ | $ | | 11 years | $ | $ | | 15 years | $ | $ | | 16 years | $ | $ | |  | | | |

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| Laurel, Inc., and Hardy Corp. both have 6 percent coupon bonds outstanding, with semiannual interest payments, and both are priced at par value. The Laurel, Inc., bond has three years to maturity, whereas the Hardy Corp. bond has 20 years to maturity. |

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| If interest rates suddenly rise by 2 percent, what is the percentage change in the price of each bond? |

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| Percentage change in price of Laurel, Inc., bond | % |
| Percentage change in price of Hardy Corp. bond | % |
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| If rates were to suddenly fall by 2 percent instead, what would be the percentage change in the price of each bond? |

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| Percentage change in price of Laurel, Inc., bond | % |
| Percentage change in price of Hardy Corp. bond | % |
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| You purchase a bond with an invoice price of $1,036. The bond has a coupon rate of 8.7 percent, and there are four months to the next semiannual coupon date. |

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| What is the clean price of the bond? |

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| Wyland Co. wants to issue new 15-year bonds for some much-needed expansion projects. The company currently has 9 percent coupon bonds on the market that sell for $1,070, make semiannual payments, and mature in 15 years. |

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| What coupon rate should the company set on its new bonds if it wants them to sell at par? |

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| Cavo Corp. has 7 percent coupon bonds making annual payments with a YTM of 6.5 percent. The current yield on these bonds is 6.85 percent. |

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| How many years do these bonds have left until they mature? |

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| A 10-year annuity of twenty $5,675 semiannual payments will begin 14 years from now, with the first payment coming 14.5 years from now. |

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| If the discount rate is 11 percent compounded monthly, what is the value of this annuity five years from now? |

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| Value of the annuity | $ |

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| If the discount rate is 11 percent compounded monthly, what is the value three years from now? |

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| Value of the annuity | $ |

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| If the discount rate is 11 percent compounded monthly, what is the current value of the annuity? |

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| Value of the annuity | $ |

What is the present value of an annuity of $6,000 per year, with the first cash flow received three years from today and the last one received 25 years from today? Use a discount rate of 7 percent.

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| Mike Bayles has just arranged to purchase a $450,000 vacation home in the Bahamas with a 30 percent down payment. The mortgage has a 5.1 percent stated annual interest rate, compounded monthly, and calls for equal monthly payments over the next 30 years. His first payment will be due one month from now. However, the mortgage has an eight-year balloon payment, meaning that the balance of the loan must be paid off at the end of Year 8. There were no other transaction costs or finance charges. |

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| How much will Mike’s balloon payment be in eight years? |

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| A prestigious investment bank designed a new security that pays a quarterly dividend of $4.00 in perpetuity. The first dividend occurs one quarter from today. |

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| What is the price of the security if the stated annual interest rate is 4.5 percent, compounded quarterly? |