

Finance 360: Principles of Financial Management (Joseph Farizo)
Problem Set 5

Version: 100

Name: _____ Key: Version 100 Due: _____ 0

Write your answers in the boxes below each question. On separate paper or using a iPad/tablet app, neatly show your work for each question. No credit will be awarded if you provide an answer but show no work. Upload as a single PDF file containing these answer sheets and your work with this as the first page. Save the file as V# where the # is your version number from the top right of this page. Example: "V101.pdf" if you have Version 101. Upload to josephfarizo.com/assignments.html. Do not round intermediate calculations, and show 4 decimal places (i.e., round 1.23456 to 1.2346 or 10.98765% to 10.9877%).

Question 1 What is the value of a share of IDEXX Laboratories if they have just paid a \$3 dividend, you expect these dividends to grow indefinitely at 3%, and the required return on the stock is 9.5%?

\$47.54

Question 2 What is the YTM of a Arista Networks corporate bond with: face value = \$1500, coupon rate = 7%, years to maturity = 25, price = \$1226? What is its current yield? Is this a premium or discount bond? This bond pays semiannual coupons at the end of each period.

YTM = 8.822%, CY = 8.5644%, discount

Question 3 What is the number you would see in the 'ASK' column in the WSJ's Treasury quotes if you see a bond with an asked yield (that is, the yield to maturity) = 1.94063%, the bond has a \$1900 par value, 30-year term, and 12 years left until maturity? The COUPON = 2.39%.

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Question 4 What is (a) the asked yield (that is, the yield to maturity) on a \$1900 par value, 20-year Treasury Bond with 13 years left until maturity? In the WSJ, the quote shows BID= 100.78, ASK = 100.97, and COUPON = 1.46%. (b) What is the dollar amount the dealer makes, or the 'bid-ask spread', from trading this bond?

(a) = 1.3782%, (b) = \$3.61

Question 5 You expect a stock's year-end dividends over the next 3 years to be \$2, \$3, and \$6. At the time the last of your forecasted dividends is paid, you expect the shares will be trading at \$153. What is the value of a share? Assume the required rate of return on these shares is 11%.

$V_0 = \$120.5$

Question 6 A Varian Medical Systems corporate bond has a face value of \$5000, coupon rate of 11%, and 30 years to maturity. Semiannual coupons are paid at the end of each period. What is an investor's YTM if the investor buys the bond for (a) \$5000? What if they pay (b) \$4000, or (c) \$6150?

(a) = 11%, (b) 13.814%, (c) 8.8089%

Question 7 What is the YTM of a Discover Financial Services corporate bond with: face value = \$1500, coupon rate = 5%, years to maturity = 10, price = \$1327? What is its current yield? Is this a premium or discount bond? This bond pays semiannual coupons at the end of each period.

YTM = 6.5933%, CY = 5.6518%, discount

Question 8 What is the price of a Iron Mountain Incorporated corporate bond with: face value = \$2000, coupon rate = 11%, years to maturity = 25, discount rate = 8%? What is its current yield assuming it sells for this price? Is this a premium or discount bond? Assume semiannual coupons at the end of each period.

Price = \$2644.47, CY = 8.3193%, premium

Question 9 A stock returned 9.8% over a period when inflation was 5.8%. A bond returned 4.8% over a period when inflation was 3.2%. What was the (a) stock's and (b) bond's real rate of return over their respective periods? Round to three decimals places (i.e., 1.987%) and use the Fisher equation.

Stock = 3.781% Bond = 1.55%

Rate this problem set from 1 to 5, with 1 being "very easy" and 5 being "very difficult." (circle one)

1 2 3 4 5

About how many minutes did you spend on this problem set? _____