

**Quiz Nº6 Solutions**  
**Finance I**

1. What are the advantages and disadvantages of holding a large reservoir of cash? (Explain each) (10 points)

Advantages:

Anything related to flexibility to meet payments and buffer unplanned negative circumstances

Disadvantages:

Anything related to inefficient use of funds or costs of opportunity

2. If the present value of \$180 paid at the end of one year is \$130, what is the one year discount rate? Show your calculations (10 points)

$$130 = 180/(1+r)$$

$$(1+r)=180/130$$

$$r = 1.38-1 = 38.4\%$$

3. If the cost of capital is 5%, what is the present value of \$400 paid in year 9? Show your calculations (10 points)

$$\frac{400}{(1+5\%)^9} = 258.84$$

4. If the cost of capital is 9%, what is the present value of a bond that pays \$12 annually for 10 years, and has a face value of 120? Show your calculations (10 points)

$$\text{Present Value of coupon payments: } \frac{C}{r} - \frac{C}{r(1+r)^t} = \frac{12}{9\%} - \frac{12}{9\%(1+9\%)^{10}}$$

$$133.33 - \frac{12}{0.21} = 133 - 57.14 = 76.19$$

$$\text{Present Value of principal payment: } \frac{C}{(1+r)^t} = \frac{120}{(1+9\%)^{10}} = 50.68$$

$$\text{Present Value of bond} = 76.19 + 50.68 = 126.87$$

5. A bond with a coupon rate of 7% is selling at a premium. Is the bond's yield to maturity more than 8%, less than 8% or impossible to determine? Explain why (10 points)

If it's selling at a premium, it means that the coupon rate is higher than the cost of capital, therefore, the yield to maturity is LESS THAN 8%

6. If you purchased a bond, regardless of the coupon rate, you will always prefer the interest rate to increase. True or False. Explain (10 points)

False, if the interest rate increases, the value of the bond decreases, therefore the buyer is in a worse position.