

### **P5 Bonds – due 9/26**

- 1) Ten years ago, Simply Splendid Corp. issued 40-year bonds with a \$1,000 face value and a 7% coupon rate, paid semiannually. Bonds of this risk currently have a yield to maturity of 9%. How much would you expect to pay for one of these bonds today? (\$793.62)
- 2) What is the value of a zero-coupon bond with 20 years to maturity and 10,000 face value if the required rate of return is 9%? (\$1,719.29))
- 3) Again Inc. bonds have a face value of \$1,000, 33 years to maturity and a coupon rate of 12% paid semiannually. The bonds are currently selling for \$1,160.
  - a. What is the yield to maturity? (10.29%)
  - b. What is the bond's current yield? (10.34%)

**P6 – due 10/3 - Stocks**

1) How much would you be willing to pay for a stock that is currently paying a dividend of \$3 and is expected to continue paying this same level of dividends if required rate is 8%? (\$37.50)

2) You are considering a stock that is expecting to pay \$2.2 in dividend next year and is expected to grow at 3% indefinitely. If the required rate of return is 14% on this stock, what should the market price be:

a) today? (\$20)

b) in 6 years? (\$23.88)

3\_ A company **just paid its annual dividend of \$2**. Divided is expected to grow at a constant rate of 6%. If the current market price per share is \$28, what is the expected rate of return? What is the divided yield? (13.57%; 7.57%)

### A7 – due 10/10 – CB part 1

Your company is evaluating two mutually exclusive projects that have **an initial cost of \$20,000** each with the following cash flow over three years:

Year	Project A	Project B
1	900	0
2	900	1500
3	1000	1500

a. If the discount rate is 6%, Calculate:

- 1) Payback period
- 2) NPV
- 3) IRR
- 4) Profitability Index

	A	B
PBP	2.20	1.33
NPV	\$489.67	\$594.42
IRR	18.54%	17.77%
PI	1.24	1.30

b. Which project should be accepted and why?

*Accept project B since it has a higher positive NPV than project A. Since they are mutually exclusive, we should not rely on IRR or PI.*

**P8 – due 10/17 – CB Part 2**

- The cost of the new machine today is \$9,000.
- New machine to be depreciated using 3 years Straight Line to a salvage of zero
- Machine life 3 years after which it is expected to sell for \$800
- Annual sales expected to be \$10,000
- Unit variable costs: 30% of sales
- Tax rate: 20%
- The required rate of return is 20%

- 1) Calculate the annual depreciation (\$3,000)
- 2) Calculate Operating Cash Flows for the next 3 years (\$6,200)
- 3) Calculate the after-tax cash flows from the asset at the end of 3 years (\$640)
- 4) Calculate NPV and IRR (\$4,430.56; 49.20%)
- 5) Should this new project be accepted? Why? (yes, should be accepted since  $NPV > 0$ )