1. HBM, Inc. has the following capital structure:

Assets $400,000 Debt $140,000

Preferred Stock 20,000

Common Stock 240,000

The common stock is currently selling for $15 a share, pays a cash dividen of

$075 per share, and is growing annually at 6 percent. The preferred stock pays a $9 cash dividend and currently sells for $91 a share. The debt pays interest of 8.52 percent annually, and the firm is the 30 percent marginal tax bracket.

1. What is the after tax cost of debt?
2. What is the cost of preferred stock?
3. What is the cost of common stock?
4. What is the firm’s weighted-average cost of capital?
5. Sun Instruments experts to issue a new stock at $34 a share with estimated floatation coast of 7 percent of the market price. The company currently pays a $2.10 cash dividend and has a 6 percent growth rate. What are the costs of retained earnings and new common stock?
6. A firm’s current balance is as follows:

Assets $100 Debt $10

Equity $90

1. What is the firm’s weighted-average cost of capital at various combinations of debt and equity, given the following information?

Debt/Assets After-Tax Cost of Debt Cost of Equity Cost of Capital

0% 8% 12% ?

10 8 12 ?

20 8 12 ?

30 8 13 ?

40 9 14 ?

50 10 15 ?

60 12 16 ?

1. Construct a pro forma balance sheet that indicates the firm’s optimal capital structure. Compare this balance sheet with the firm’s current balance sheet.

What course of action should the firm take?

Assets $100 Debt $?

Equity $?

1. As a firm initially substitutes debt for equity financing, what happens to the cost of capital and why?
2. If a firm uses too much debt financing, why does the cost of capital rise?

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1. You purchase machinery for $23,958 that generates cash flow of $6,000 for five years. What is the internal rate of return on the investment?
2. The cost of capital for a firm is 10 percent. The firm has two possible investments with the following cash inflows:

A B

Year1 $300 $200

2 200 200

3 100 200

a. Each investment costs. $480. What investment (s) should the firm make according to net present value?

B. What is the internal rate of return for the two investments? Which investments(s) should the firm make? Is this the same answer you obtained in part a?

C. If the cost of capital rises to 14 percent , which investment(s) should the firm make?

1. A firm has the following investment alternatives:

# Cash Inflows

A B C

Year 1 $1,100 $3,600 -

2 1,100 - -

3 1,100 - $4,562

Each invest cost $3000; investments B and C are mutually exclusive and the firm’s cost of capital is 8 percent.

1. What is the net present value of each investment?
2. According to the net present values, which investment(s) should the firm make? Why?
3. What is the internal rate of return on each investment?
4. According to the internal rates of return, which investment(s) should the firm make? Why?
5. According to both the net present values and internal rates of returns, which investments should the firm make?
6. If the firm could reinvest the $3,600 earned in year one from investment B at 10%, what effect would that information have on your answer to part e? Would the answer be different if the rate were 14 percent?
7. If the firm’s cost of capital had been 10 percent, what would be investment? A’s internal rate of return?
8. The payback method of capital budgeting selects which investment? Why?
9. The chief financial officer has asked you to calculate the net present values and internal rates of return of $50,000 mutually exclusive investments with the following cash flows:

Project A Project B

Cash flow Cash Flow

Year1 $10,000 $ 0

2 25,000 22,000

3 30,000 48,000

If the firm’s cost of capital is 9 percent, which investment(s) would you recommend? Would your answer be different if the cost of capital were 14 percent?

1. An investment with total costs of $10,000 will generate total revenues of $11,000 from one year. Management thinks that since the investment is profitable, it should be made. Do you agree? What additional information would you want ? If funds cost 12 percent, what would be your advice to management? Would your answer be different if the cost of capital is 8 percent?
2. The financial manager has determined the following schedules for the cost of funds:

Cost of Cost of Equity

Debt Ratio Debt

0% 5% 13%

10 5 13

20 5 13

30 5 13

40 5 14

50 6 15

60 8 16

a. Determine the firm’s optimal capital structure.

b. Construct a simple pro forma balance sheet that shows the firm’s optimal combination of debt and equity for its current level of assets.

Assets $500 Debt \_

Equity \_

$500

c. An investment costs $400 and offers annual cash inflows of $133 for five years. Should the firm make the investment?

d. If the firm makes the additional investment, how should it balance sheet appear?

Assets \_ Debt \_

Equity \_

1. If the firm is operating with its optimal capital structure and a $400 asset yields 20.0 percent, what return will the stockholders earn on their investment in the asset?
2. Investments Quick and slow cost $1,000 each, are mutually exclusive, and have the following cash flows. The firm’s cost of capital is 10 percent.

Cash Inflows

Q S

Year1 $1,300 $386

2 \_ 386

3 \_ 386

4 \_ 386

a. According to the net present value method of capital budgeting, which investment(s) should the firm make?

b. According to the internal rate of return method of capital budgeting, which investments(s) should the firm make?

c. If Q is chosen, the $1,300 can be reinvested and earn 12 percent. Does this information alter your conclusions concerning investing in Q and S? To answer, assume the S’s cash flows can be reinvested at its internal rate of return. Would you answer be different if S’s cash flows were reinvested at the cost of capital (10 percent)?