CHAPTER 15
Cost of Capital

I. DEFINITIONS

COST OF CAPITAL

a 1. The opportunity cost associated with the firm's capital investment in a project is called its:
   a. cost of capital.
   b. beta coefficient.
   c. capital gains yield.
   d. sunk cost.
   e. internal rate of return.

COST OF EQUITY

b 2. The return that shareholders require on their investment in the firm is called the:
   a. dividend yield.
   b. cost of equity.
   c. capital gains yield.
   d. cost of capital.
   e. income return.

COST OF DEBT

c 3. The return that lenders require on their loaned funds to the firm is called the:
   a. coupon rate.
   b. current yield.
   c. cost of debt.
   d. capital gains yield.
   e. cost of capital.

CAPITAL STRUCTURE WEIGHTS

d 4. The proportions of the market value of the firm's assets financed via debt, common stock, and preferred stock are called the firm's:
   a. financing costs.
   b. portfolio weights.
   c. beta coefficients.
   d. capital structure weights.
   e. costs of capital.

WACC

e 5. The weighted average of the firm's costs of equity, preferred stock, and aftertax debt is the:
   a. reward to risk ratio for the firm.
   b. expected capital gains yield for the stock.
   c. expected capital gains yield for the firm.
   d. portfolio beta for the firm.
   e. weighted average cost of capital (WACC).

DIVISIONAL COST OF CAPITAL

a 6. For a firm with multiple business units, the cost of capital developed for each unit is

called a:
a. divisional cost of capital.
b. pure play approach.
c. subjective risk adjustment.
d. stratified beta coefficient.
e. fundamental beta coefficient.

PURE PLAY APPROACH

b 7. When firms develop a WACC for individual projects based on the cost of capital for other firms in similar lines of business as the project, the firm is utilizing a _____ approach.
a. subjective risk
b. pure play
c. divisional cost of capital
d. capital adjustment
e. security market line

FLOTATION COSTS

c 8. The costs incurred by the firm when new issues of stocks or bonds are sold are called:
a. required rates of return.
b. costs of capital.
c. flotation costs.
d. capital structure weights.
e. costs of equity and debt.

II. CONCEPTS

COST OF CAPITAL

e 9. The cost of capital:
a. will decrease as the risk level of a firm increases.
b. is primarily dependent on the source of the funds used in a project.
c. implies that a project will produce a positive net present value only when the rate of return on the project is less than the cost of capital.
d. remains constant for all projects sponsored by the same firm.
e. depends on how the funds are going to be utilized.

COST OF CAPITAL

c 10. The overall cost of capital for a retail store:
a. is equivalent to the after-tax cost of the firm's liabilities.
b. should be used as the required return when analyzing a potential acquisition of a wholesale distributor.
c. reflects the return investors require on the total assets of the firm.
d. remains constant even when the debt-equity ratio changes.
e. is unaffected by changes in corporate tax rates.

COST OF EQUITY

d 11. A firm's overall cost of equity is:
- I. directly observable in the financial markets.
- II. unaffected by changes in the market risk premium.
- III. highly dependent upon the growth rate and risk level of a firm.
- IV. an estimate only.

a. I and III only
b. II and IV only
c. I and II only
d. III and IV only
e. I and IV only

COST OF EQUITY

b 12. The cost of equity for a firm is:
a. determined by directly observing the rate of return required by equity investors.
b. based on estimates derived from financial models.
c. equivalent to a leveraged firm's cost of capital.
d. equal to the risk-free rate of return plus the market risk premium.
e. equal to the risk-free rate of return plus the dividend growth rate.

DIVIDEND GROWTH MODEL

c 13. The dividend growth model:
a. can be used to estimate the cost of equity for any corporation.
b. is applicable only to firms that pay a constant dividend.
c. is highly dependent upon the estimated rate of growth.
d. is considered quite complex.
e. considers the risk of the firm.

DIVIDEND GROWTH MODEL

c 14. The dividend growth model:
a. generally produces the same estimated cost of equity for a firm regardless of the source of information used to predict the rate of growth.
b. can only be used if historical dividend information is available.
c. ignores the risk that future dividends may vary from their estimated values.
d. assumes that both the dividend amount and the stock price are not constant over time.
e. uses beta to measure the systematic risk of the firm.

SECURITY MARKET LINE APPROACH

a 15. The market risk premium:
a. varies over time as both the risk-free rate of return and the market rate of return vary.
b. plus the risk-free rate of return equals the cost of capital for any firm with a beta of zero.
c. is equal to one percent for a risk-free asset.
d. is equal to the risk-free rate of return multiplied by the beta of a firm.
e. is modified by the standard deviation when computing the cost of equity.

SECURITY MARKET LINE APPROACH

e 16. Which of the following statements are correct concerning the security market line (SML) approach?
   I. The SML approach considers the amount of systematic risk associated with an individual firm.
   II. The SML approach can be applied to more firms than the dividend growth model can.
   III. The SML approach generally relies on the past to predict the future.
   IV. The SML approach generally assumes that the reward-to-risk ratio is constant.
   a. I and III only
   b. II and IV only
   c. III and IV only
   d. I, II, and III only
   e. I, II, III, and IV

COST OF DEBT

a 17. The pre-tax cost of debt for a firm:
   a. is equal to the yield to maturity on the outstanding bonds of the firm.
   b. is equal to the coupon rate of the outstanding bonds of the firm.
   c. is equivalent to the current yield on the outstanding bonds of the firm.
   d. is based on the yield to maturity that existed when the currently outstanding bonds were originally issued.
   e. has to be estimated as it cannot be directly observed in the market.

COST OF DEBT

d 18. The after-tax cost of debt generally increases when:
   I. a firm's bond rating increases.
   II. the market rate of interest increases.
   III. tax rates decrease.
   IV. bond prices decline.
   a. I and III only
   b. II and III only
   c. I, II, and III only
   d. II, III, and IV only
   e. I, II, III, and IV

COST OF PREFERRED STOCK

d 19. The cost of preferred stock is computed the same as:
   a. the pre-tax cost of debt.
   b. an annuity.
   c. the after-tax cost of debt.
   d. a perpetuity.
   e. an irregular growth common stock.

COST OF PREFERRED STOCK

a 20. The cost of preferred stock:
   a. is equal to the dividend yield on the stock.
   b. is equal to the yield to maturity.
   c. is highly dependent on the growth rate.
   d. varies directly with the stock's price.
   e. is difficult to determine.

CAPITAL STRUCTURE WEIGHTS

d 21. The capital structure weights used in computing the weighted average cost of capital are:
   a. constant over time provided that the debt-equity ratio changes in unison with the market values.
   b. based on the face value of the firm's debt.
   c. computed using the book value of the long-term debt and the shareholder's equity.
   d. based on the market value of the firm's debt and equity securities.
   e. limited to the firm's debt and common stock.

CAPITAL STRUCTURE WEIGHTS

c 22. Your firm uses both preferred and common stock as well as long-term debt to finance its operations. Which one of the following will increase the capital structure weight of the debt, all else equal?
   a. an increase in the market price of the common stock
   b. an increase in the number of shares of preferred stock outstanding
   c. an increase in the quoted price of the firm's bonds as a percentage of face value
   d. the exercise of warrants by company employees
   e. the conversion of convertible bonds into equity shares

WEIGHTED AVERAGE COST OF CAPITAL

e 23. The weighted average cost of capital for a firm is dependent upon the firm's:
   I. tax rate.
   II. debt-equity ratio.
   III. coupon rate on the preferred stock.
   IV. level of risk.
   a. I and III only
   b. II and IV only
   c. I, II, and IV only
   d. I, III, and IV only
   e. I, II, III, and IV

WEIGHTED AVERAGE COST OF CAPITAL

b 24. The weighted average cost of capital for a firm is the:
   a. discount rate which the firm should apply to all of the projects it undertakes.
   b. overall rate which the firm must earn on its existing assets to maintain the value of its stock.
   c. rate the firm should expect to pay on its next bond issue.
   d. maximum rate which the firm should require on any projects it undertakes.
   e. rate of return that the firm's preferred stockholders should expect to earn over the long term.

WEIGHTED AVERAGE COST OF CAPITAL

e 25. Which one of the following statements is correct concerning the weighted average cost of capital (WACC)?
   a. The pre-tax rate of return on the debt is the rate that is relevant to the computation of the WACC.
   b. When computing the WACC, the weight assigned to the preferred stock is equal to the coupon rate multiplied by the par value assigned to the preferred stock.
   c. A firm's WACC will decrease as their corporate tax rate decreases.
   d. The weight of the common stock used in the computation of the WACC is based on the number of shares outstanding multiplied by the book value per share.
   e. The weight of the debt can be based on the face value of the bond issue(s) outstanding multiplied by the quoted price(s) when expressed as a percentage of the face value.

WEIGHTED AVERAGE COST OF CAPITAL

d 26. If a firm uses its WACC as the discount rate for all of the projects it undertakes then the firm will tend to:
   I. reject some positive net present value projects.
   II. accept some negative net present value projects.
   III. favor low risk projects over high risk projects.
   IV. become riskier over time.
   a. I and III only
   b. III and IV only
   c. I and II only
   d. I, II, and IV only
   e. I, II, III, and IV

DIVISIONAL COST OF CAPITAL

d 27. Swanson & Sons has two separate divisions. Each division is in a separate line of business. Division A is the largest division and represents 65 percent of the firm's overall sales. Division A is also the riskier of the two divisions. Division B is the smaller and least risky of the two. When the company is deciding which of the various divisional projects should be accepted they should:
   a. allocate more funds to Division A since it is the largest of the two divisions.
   b. fund all of Division B's projects first since they tend to be less risky and then allocate the remaining funds to the Division A projects that have the highest net present values.
   c. allocate the company funds to the projects with the highest net present values based on the firm's weighted average cost of capital.
   d. assign different discount rates to each project and then select the projects with the highest net present values.
   e. fund the highest net present value projects from each division based on an allocation of 65 percent of the funds to Division A and 35 percent of the funds to Division B.

DIVISIONAL COST OF CAPITAL

a 28. If a firm applies its overall cost of capital to all its proposed projects, then the divisions within the firm will tend to:
   a. receive more funding if they represent the riskiest operations of the firm.
   b. avoid risky projects so that they will receive more funding.
   c. become less risky over time based on the projects that are accepted.
   d. have equal probabilities of receiving funding for their projects.
   e. propose less risky projects than if separate discount rates were applied to each project.

PROJECT COST OF CAPITAL

e 29. The discount rate assigned to an individual project should be based on:
   a. the firm's weighted average cost of capital.
   b. the actual sources of funding used for the project.
   c. an average of the firm's overall cost of capital for the past five years.
   d. the current risk level of the overall firm.
   e. the risk level of the project itself.

PROJECT COST OF CAPITAL

a 30. Assigning separate discount rates to individual projects when determining which projects should be accepted by the firm:
   a. may cause the firm's overall weighted average cost of capital to vary over time if the projects accepted change the overall risk level of the firm.
   b. will cause the firm's overall cost of capital to remain constant over time.
   c. will cause the firm's overall cost of capital to decrease over time.
   d. will change the debt-equity ratio of the firm over time.
   e. negates the principle goal of creating the most value for the shareholders.

PROJECT COST OF CAPITAL

e 31. The cost of capital assigned to an individual project should be that rate which:
   a. corresponds to the risk level of the firm's division which has responsibility for the project.
   b. corresponds to the source of the funds used for the project.
   c. corresponds to the latest pre-tax cost of debt and equity for the overall firm.
   d. is the firm's current weighted average cost of capital.
   e. considers both the nature and the characteristics of the actual project.

PURE PLAY APPROACH

d 32. Wayne's of New York specializes in clothing for female executives living and working in the financial district of New York City. Allen's of PA. specializes in clothing for women who live and work in the rural areas of Western Pennsylvania. Both firms are currently considering expanding their clothing line to encompass working women in the rural upstate region of New York state. Wayne's currently has a cost of capital of 11 percent while Allen's cost of capital is 9 percent. The expansion project has a projected net present value of $36,900 at a 9 percent discount rate and a net present value of -$13,200 at an 11 percent discount rate. Which firm or firms should expand into rural New York state?
   a. Wayne's only
   b. Allen's only
   c. neither Wayne's nor Allen's
   d. both Wayne's and Allen's
   e. cannot be determined from the information provided

PURE PLAY APPROACH

d 33. The Jasper Mountain Co. specializes in back-country camping facilities across the nation. The Plan It Co. specializes in making travel reservations and promoting vacation travel. Jasper has an after-tax cost of capital of 12 percent and Plan It has an after-tax cost of capital of 10 percent. Both firms are considering building wilderness campgrounds complete with their own lakes and numerous mountain trails. The estimated net present value of such a project is estimated at $13,000 at a discount rate of 10 percent and -$6,500 (negative) at a 12 percent discount rate. Which firm or firms, if either, should accept this project?

a. Jasper only
b. Plan It only
c. both Jasper and Plan It
d. neither Jasper nor Plan It
e cannot be determined without further information

SUBJECTIVE APPROACH

d 34. The subjective approach to project analysis:

a. is used only when the firm's cost of capital is unknown.
b. uses the market rate of return as the base rate which is then adjusted for the risk level of each project.
c. is a purely random allocation of discount rates to various projects.
d. allows managers to adjust for the risk level of each project without knowing the actual beta of the project.
e. uses the beta of each project to determine the appropriate discount rate for the project.

SUBJECTIVE APPROACH

d 35. When a firm uses the subjective approach to assign discount rates to projects, the firm:

I. will assign its highest discount rate to those projects which are mandated by the government.
II. risks accepting projects which should have been rejected.
III. risks rejecting projects which should have been accepted.
IV. generally makes better decisions than it would if it applied the firm's weighted average cost of capital to all projects.

a. I and III only
b. II and IV only
c. I, II, and III only
d. II, III, and IV only
e. I, II, III, and IV

FLOTATION COSTS AND WACC

e 36. When a firm has flotation costs equal to 6 percent of the funding need, it should:

a. increase the weighted average cost of capital (WACC) to offset these expenses by multiplying the WACC by 1.06.
b. increase the weighted average cost of capital (WACC) to offset these expenses by dividing the WACC by (1 – .06).
c. add 6 percent to the weighted average cost of capital to get the discount rate for the project.
d. increase the initial project cost by multiplying that cost by 1.06.
e. increase the initial project cost by dividing that cost by (1 – .06).

FLOTATION COSTS AND WACC

b 37. The flotation cost for a firm is computed as:
   a. the arithmetic average of the flotation costs of both debt and equity.
   b. the weighted average of the flotation costs associated with each form of financing.
   c. the geometric average of the flotation costs associated with each form of financing.
   d. one-half of the flotation cost of debt plus one-half of the flotation cost of equity.
   e. a weighted average based on the book values of the firm's debt and equity.

FLOTATION COSTS AND NPV

d 38. Including flotation costs into the net present value of a project will:
   a. not affect that net present value.
   b. increase the net present value of the project.
   c. increase the discount rate applied to the project thereby lowering the project's net present value.
   d. increase the initial cash outflow of the project thereby lowering the project's net present value.
   e. affect the net present value but the direction of that impact cannot be determined.

FLOTATION COSTS AND NPV

e 39. Flotation costs should:
   a. be ignored when analyzing a project because they are not an actual cost of the project.
   b. be averaged over the life of the project thereby reducing the cash flows for each year of the project.
   c. only be considered when two projects have the same net present value.
   d. be subtracted from the initial cost of a project before the net present value of the project is computed.
   e. be included in project analysis as an additional initial cost of the project.

III. PROBLEMS

COST OF EQUITY

d 40. Martin Industries just paid an annual dividend of $1.20 a share. The market price of the stock is $26.60 and the growth rate is 4 percent. What is the firm's cost of equity?
   a. 8.38 percent
   b. 8.51 percent
   c. 8.57 percent
   d. 8.69 percent
   e. 8.74 percent

COST OF EQUITY

b 41. Swiss Cheeses, Inc. has paid annual dividends of $1.00, $1.04, $1.09, and $1.15 per share over the last four years, respectively. The stock is currently selling for $42 a share. What is this firm's cost of equity?
   a. 7.45 percent
   b. 7.64 percent
   c. 7.83 percent
   d. 7.87 percent
   e. 8.02 percent

COST OF EQUITY

c 42. Neal Enterprises common stock is currently priced at $36.80 a share. The company is expected to pay $1.20 per share next month as their annual dividend. The dividends have been increasing by 2 percent annually and are expected to continue doing so. What is the cost of equity for Neal Enterprises?
   a. 5.18 percent
   b. 5.22 percent
   c. 5.26 percent
   d. 5.33 percent
   e. 5.67 percent

COST OF EQUITY

e 43. The common stock of Big Birds Unlimited has a required return of 8 percent and a growth rate of 4 percent. The last annual dividend was $.60 a share. What is the current price of this stock?
   a. $7.50
   b. $7.80
   c. $10.00
   d. $15.00
   e. $15.60

COST OF EQUITY

e 44. The Adept Co. has paid annual dividends of $.80, $.92, $.98, $1.04, and $1.09 over the past five years respectively. What is the average dividend growth rate?
   a. 6.52 percent
   b. 6.84 percent
   c. 7.33 percent
   d. 7.81 percent
   e. 8.11 percent

COST OF EQUITY

c 45. Ben's Ice Cream just paid their annual dividend of $.75 a share. The stock has a market price of $32 and a beta of .90. The return on the U.S. Treasury bill is 4 percent and the market has a 12 percent rate of return. What is the cost of equity?
   a. 7.24 percent
   b. 8.67 percent
   c. 11.20 percent
   d. 12.92 percent
   e. 14.80 percent

COST OF EQUITY

c 46. Rosie's Grill has a beta of 1.2, a stock price of $26 and an expected annual dividend of $1.30 a share which is to be paid next month. The dividend growth rate is 4 percent. The market has a 10 percent rate of return and a risk premium of 6 percent. What is the average expected cost of equity for Rosie's Grill?
   a. 9.20 percent
   b. 9.70 percent
   c. 10.10 percent
   d. 10.30 percent
   e. 11.40 percent

COST OF EQUITY

d 47. Daniel's Enterprises has a beta of 1.98 and a growth rate of 12 percent. The stock is currently selling for $12 a share. The overall stock market has an 11 percent rate of return and a risk premium of 8 percent. What is the expected rate of return on Daniel's Enterprises stock?

a. 10.00 percent
b. 15.85 percent
c. 16.67 percent
d. 18.84 percent
e. 19.06 percent

COST OF EQUITY

c 48. Martha' s Interiors has a current beta of 1.2. The market risk premium is 6 percent and the risk-free rate of return is 4 percent. By how much will the cost of equity increase if the company completes an acquisition such that their company beta rises to 1.4?

a. 0.12 percent
b. 0.24 percent
c. 1.20 percent
d. 2.40 percent
e. 2.47 percent

COST OF DEBT

d 49. The Bet-r-Bilt Company has a six-year bond outstanding with a 5 percent coupon. Interest payments are paid semi-annually. The face amount of the bond is $1,000. This bond is currently selling for 98 percent of its face value. What is the company's pre-tax cost of debt?

a. 4.72 percent
b. 5.31 percent
c. 5.35 percent
d. 5.39 percent
e. 5.42 percent

COST OF DEBT

a 50. Wilson's Cabinets has bonds outstanding that mature in eight years, have a 6 percent coupon and pay interest annually. These bonds have a face value of $1,000 and a current market price of $1,020. What is the company's pre-tax cost of debt?

a. 5.68 percent
b. 6.19 percent
c. 6.34 percent
d. 6.82 percent
e. 7.57 percent

COST OF DEBT

b 51. Katie's Boutique has zero-coupon bonds outstanding that mature in four years. The bonds have a face value of $1,000 and a current market price of $820. What is the company's pre-tax cost of debt?
   a. 5.01 percent
   b. 5.09 percent
   c. 5.18 percent
   d. 5.36 percent
   e. 5.49 percent

COST OF DEBT

d 52. Ernst's Electrical has a bond issue outstanding with ten years to maturity. These bonds have a $1,000 face value, a 5 percent coupon, and pay interest semi-annually. The bonds are currently quoted at 96 percent of face value. What is Ernst's pre-tax cost of debt?
   a. 4.47 percent
   b. 4.97 percent
   c. 5.33 percent
   d. 5.53 percent
   e. 5.94 percent

AFTER-TAX COST OF DEBT

b 53. Blackwater Adventures has a bond issue outstanding that matures in sixteen years. The bonds pay interest semi-annually. Currently, the bonds are quoted at 103 percent of face value and carry a 9 percent coupon. The firm's tax rate is 34 percent. What is the firm's after-tax cost of debt?
   a. 5.19 percent
   b. 5.71 percent
   c. 7.86 percent
   d. 8.65 percent
   e. 11.41 percent

AFTER-TAX COST OF DEBT

a 54. The outstanding bonds of The Purple Fiddle are priced at $898 and mature in nine years. These bonds have a 6 percent coupon and pay interest annually. The firm's tax rate is 35 percent. What is the firm's after-tax cost of debt?
   a. 4.94 percent
   b. 5.24 percent
   c. 5.30 percent
   d. 7.18 percent
   e. 7.61 percent

AFTER-TAX COST OF DEBT

a 55. Tom's Ventures has a zero coupon bond issue outstanding that matures in thirteen years. The bonds are selling at 48 percent of par value. The company's tax rate is 34 percent. What is the company's after-tax cost of debt?
   a. 3.83 percent
   b. 4.11 percent
   c. 4.73 percent
   d. 4.80 percent
   e. 5.81 percent

COST OF PREFERRED

e 56. Jensen's Travel Agency has a 7 percent preferred stock outstanding that is currently selling for $48 a share. The market rate of return is 10 percent and the firm's tax rate is 34 percent. What is the Jensen's cost of preferred stock?
   a. 8.75 percent
   b. 9.62 percent
   c. 11.98 percent
   d. 13.25 percent
   e. 14.58 percent

COST OF PREFERRED

d 57. Donnelly and Son pay $8 as the annual dividend on their preferred stock. Currently, this stock is selling for $72 a share. What is Donnelly's cost of preferred stock?
   a. 7.78 percent
   b. 9.00 percent
   c. 9.72 percent
   d. 11.11 percent
   e. 11.99 percent

COST OF PREFERRED

c 58. Teri's Tires has 7 percent preferred stock outstanding that sells for $68 a share. What is Teri's cost of preferred stock?
   a. 9.52 percent
   b. 9.71 percent
   c. 10.29 percent
   d. 10.78 percent
   e. 11.76 percent

CAPITAL STRUCTURE WEIGHTS

b 59. The Auto Group has 1,200 bonds outstanding that are selling for $980 each. The company also has 7,500 shares of preferred stock at a market price of $40 each. The common stock is priced at $32 a share and there are 32,000 shares outstanding. What is the weight of the preferred stock as it relates to the firm's weighted average cost of capital?
   a. 10 percent
   b. 12 percent
   c. 14 percent
   d. 16 percent
   e. 18 percent

CAPITAL STRUCTURE WEIGHTS

b 60. Watson's Automotive has a $400,000 bond issue outstanding that is selling at 102 percent of face value. Watson's also has 4,500 shares of preferred stock and 21,000 shares of common stock outstanding. The preferred stock has a market price of $44 a share compared to a price of $21 a share for the common stock. What is the weight of the debt as it relates to the firm's weighted average cost of capital?

a. 38 percent
b. 39 percent
c. 40 percent
d. 41 percent
e. 42 percent

CAPITAL STRUCTURE WEIGHTS

a 61. Gillian's Boutique has 850,000 shares of common stock outstanding at a market price of $16 a share. The company also has 15,000 bonds outstanding that are quoted at 98 percent of face value. What weight should be given to the common stock when Gillian's computes their weighted average cost of capital?

a. 48 percent
b. 49 percent
c. 50 percent
d. 51 percent
e. 52 percent

WEIGHTED AVERAGE COST OF CAPITAL

c 62. Jack's Construction Co. has 80,000 bonds outstanding that are selling at par value. Bonds with similar characteristics are yielding 8.5 percent. The company also has 4 million shares of common stock outstanding. The stock has a beta of 1.1 and sells for $40 a share. The U.S. Treasury bill is yielding 4 percent and the market risk premium is 8 percent. Jack's tax rate is 35 percent. What is Jack's weighted average cost of capital?

a. 7.10 percent
b. 7.39 percent
c. 10.38 percent
d. 10.65 percent
e. 11.37 percent

WEIGHTED AVERAGE COST OF CAPITAL

d 63. Peter's Audio Shop has a cost of debt of 7 percent, a cost of equity of 11 percent, and a cost of preferred stock of 8 percent. The firm has 104,000 shares of common stock outstanding at a market price of $20 a share. There are 40,000 shares of preferred stock outstanding at a market price of $34 a share. The bond issue has a total face value of $500,000 and sells at 102 percent of face value. The company's tax rate is 34 percent. What is the weighted average cost of capital for Peter's Audio Shop?

a. 6.14 percent
b. 6.54 percent
c. 8.60 percent
d. 9.14 percent
e. 9.45 percent

WEIGHTED AVERAGE COST OF CAPITAL

c 64. Phil's Carvings, Inc. wants to have a weighted average cost of capital of 9 percent. The firm has an after-tax cost of debt of 5 percent and a cost of equity of 11 percent. What debt-equity ratio is needed for the firm to achieve their targeted weighted average cost of capital?

a. .33
b. .40
c. .50
d. .60
e. .67

WEIGHTED AVERAGE COST OF CAPITAL

d 65. Jake's Sound Systems has 210,000 shares of common stock outstanding at a market price of $36 a share. Last month, Jake's paid an annual dividend in the amount of $1.593 per share. The dividend growth rate is 4 percent. Jake's also has 6,000 bonds outstanding with a face value of $1,000 per bond. The bonds carry a 7 percent coupon, pay interest annually, and mature in 4.89 years. The bonds are selling at 99 percent of face value. The company's tax rate is 34 percent. What is Jake's weighted average cost of capital?

a. 5.3 percent
b. 5.8 percent
c. 6.3 percent
d. 6.9 percent
e. 7.2 percent

WEIGHTED AVERAGE COST OF CAPITAL

b 66. Shirley's and Son have a debt-equity ratio of .60 and a tax rate of 35 percent. The firm does not issue preferred stock. The cost of equity is 10 percent and the pre-tax cost of debt is 8 percent. What is Shirley's weighted average cost of capital?

a. 6.1 percent
b. 8.2 percent
c. 8.4 percent
d. 9.1 percent
e. 9.4 percent

WEIGHTED AVERAGE COST OF CAPITAL

c 67. The Abco Co. maintains a debt-equity ratio of .70 and has a tax rate of 39 percent. The firm does not issue preferred stock. The cost of equity is 12 percent and the after-tax cost of debt is 5 percent. What is Abco's weighted average cost of capital?

a. 8.8 percent
b. 8.9 percent
c. 9.1 percent
d. 9.3 percent
e. 9.5 percent

WEIGHTED AVERAGE COST OF CAPITAL

a 68. Wilson's has 10,000 shares of common stock outstanding at a market price of $35 a share. The firm also has a bond issue outstanding with a total face value of $250,000 which is selling for 102 percent of face value. The cost of equity is 11 percent while the pre-tax cost of debt is 8 percent. The firm has a beta of 1.1 and a tax rate of 34 percent. What is Wilson's weighted average cost of capital?
   a. 8.59 percent
   b. 8.72 percent
   c. 9.08 percent
   d. 9.63 percent
   e. 10.05 percent

PROJECT COST OF CAPITAL

b 69. Jeb's Automotive has a beta of 1.0 and a cost of equity of 14 percent. The risk-free rate of return is 5 percent. Jeb's is considering a project with a beta of .75. An appropriate discount rate for the project is:
   a. 10.25 percent.
   b. 11.75 percent.
   c. 12.00 percent.
   d. 13.50 percent.
   e. 14.75 percent.

PROJECT COST OF CAPITAL

d 70. Outside Johnnie's has a beta of 1.3 and a cost of equity of 12.3 percent. The risk-free rate of return is 4.5 percent. Johnnie's is considering a project with a beta of 1.4 and a project life of six years. An appropriate discount rate for the project is:
   a. 12.33 percent.
   b. 12.50 percent.
   c. 12.78 percent.
   d. 12.90 percent.
   e. 13.11 percent.

CAPITAL BUDGETING PROBLEM

a 71. Douglass Enterprises has a capital structure which is based on 40 percent debt, 10 percent preferred stock, and 50 percent common stock. The after-tax cost of debt is 6 percent, the cost of preferred is 7 percent, and the cost of common stock is 9 percent. The company is considering a project that is equally as risky as the overall firm. This project has initial costs of $125,000 and cash inflows of $76,000 a year for two years. What is the projected net present value of this project?
   a. $11,275.07
   b. $11,398.16
   c. $11,403.03
   d. $11,006.18
   e. $11,783.43

CAPITAL BUDGETING PROBLEM

c 72. Antonio's is analyzing a project with an initial cost of $45,000 and cash inflows of $30,000 a year for two years. This project is an extension of the firm's current operations and thus is equally as risky as the current firm. The firm uses only debt and common stock to finance their operations and maintains a debt-equity ratio of .40. The pre-tax cost of debt is 8 percent and the cost of equity is 12 percent. The tax rate is 34 percent. What is the projected net present value of this project?

a. $6,471.37
b. $6,700.39
c. $7,010.27
d. $7,056.67
e. $7,066.12

CAPITAL BUDGETING PROBLEM

b 73. O.K., Inc. uses one-third debt and two-thirds common stock to finance their operations. The after-tax cost of debt is 4.5 percent and the cost of equity is 9 percent. The management of O.K., Inc. is considering a small project that they consider to be equally as risky as the overall firm. The project has an initial cash outlay of $10,000. The project is expected to have a single cash inflow of $17,500 at the end of two years. What is the projected net present value of this project?

a. $5,040.41
b. $5,143.32
c. $5,707.07
d. $6,025.27
e. $6,279.07

CAPITAL BUDGETING PROBLEM

a 74. Tony's Pizza is considering a new project that they consider to be a little riskier than their current operations. Thus, management has decided to add an additional 2 percent to their company's overall cost of capital when evaluating this project. The project has an initial cash outlay of $42,000 and projected cash inflows of $15,000 in year one, $25,000 in year two, and $12,000 in year three. The firm uses 35 percent debt and 65 percent common stock as their capital structure. The company's cost of equity is 13 percent while the after-tax cost of debt for the firm is 6 percent. What is the projected net present value of the new project?

a. -$520.29
b. -$127.08
c. $26.18
d. $413.39
e. $906.49

DIVISIONAL COST OF CAPITAL

b 75. Benson's, Inc. has an overall cost of equity of 10.24 percent and a beta of 1.2. The firm is financed 100 percent with common stock. The risk-free rate of return is 4 percent. What is an appropriate cost of capital for a division within the firm that has an estimated beta of 1.5?
   a. 11.6 percent
   b. 11.8 percent
   c. 12.0 percent
   d. 12.4 percent
   e. 12.8 percen

DIVISIONAL COST OF CAPITAL

a 76. Buy It Cheap has an overall beta of .88 and a cost of equity of 11.2 percent for the firm overall. The firm is 100 percent financed with common stock. Division A within the firm has an estimated beta of 1.34 and is the riskiest of all of the firm's operations. What is an appropriate cost of capital for division A if the market risk premium is 5 percent?
   a. 13.5 percent
   b. 14.7 percent
   c. 15.3 percent
   d. 15.9 percent
   e. 17.1 percent

PURE PLAY APPROACH

c 77. Alpha and Beta are separate firms that are both considering an oil exploration project. Alpha currently operates an oil refining and distribution network and has an after-tax cost of capital of 12 percent. Beta owns oil fields and concentrates on oil production. Beta's after-tax cost of capital is 15 percent. The project under consideration has initial costs of $150,000 and anticipated annual cash inflows of $32,000 a year for ten years. Which firm(s) should accept this project, if any?
   a. Alpha only
   b. Beta only
   c. both Alpha and Beta
   d. neither Alpha nor Beta
   e. can not be determined without further information

PURE PLAY APPROACH

b 78. Martin Enterprises sells motor homes and campers and currently has an after-tax cost of capital of 7 percent. Nagle's sells off-road dirt bikes and has an after-tax cost of capital of 13 percent. Martin Enterprises is considering adding dirt bikes as part of their sales lineup. They estimate that sales from these bikes could become 10 percent of their overall sales. The initial cash outlay for this project is $50,000. The expected net cash inflows are $8,000 a year for nine years. What is the net present value of this project to Martin Enterprises?
   a. -12,003.66
   b. -$8,946.76
   c. -$1,007.07
   d. $2,121.86
   e. $2,886.02

PURE PLAY APPROACH

e 79. The Delta Co. owns retail stores that market home building supplies. Largo, Inc. builds single family homes in residential developments. Delta has a beta of 1.22 and Largo has a beta of 1.34. The risk-free rate of return is 4 percent and the market risk premium is 6.5 percent. What should Delta use as their cost of equity if they decide to purchase some land and create a new residential community?
   a. 11.93 percent
   b. 12.32 percent
   c. 12.43 percent
   d. 12.57 percent
   e. 12.71 perccnet

FLOTATION COST AND WEIGHTED AVERAGE COST OF CAPITAL

d 80. The Gilbert Co. uses 60 percent common stock, 10 percent preferred stock, and 30 percent debt as their capital structure. The flotation costs are 4 percent for debt, 8 percent for preferred stock, and 7 percent for common stock. What is the weighted average flotation cost?
   a. 5.4 percent
   b. 5.5 percent
   c. 5.9 percent
   d. 6.2 percent
   e. 6.3 percent

FLOTATION COST

a 81. The Jamestown Co. has a capital structure which is based on 40 percent debt, 15 percent preferred stock, and 45 percent common stock. The flotation costs are 8 percent for common stock, 9 percent for preferred stock, and 4 percent for debt. What is the weighted average flotation cost?
   a. 6.55 percent
   b. 6.68 percent
   c. 6.87 percent
   d. 7.00 percent
   e. 7.19 percent

FLOTATION COST

e 82. The Lingo Co. has a debt-equity ratio of .60. The firm is analyzing a new project which requires an initial cash outlay of $450,000 for new equipment. The flotation cost for new equity is 10 percent and for debt 5 percent. What is the initial cost of the project including the flotation costs?
   a. $413,438
   b. $483,750
   c. $486,486
   d. $486,563
   e. $489,796

FLOTATION COST

c 83. You are considering a project which requires $136,000 in external financing. The flotation cost of equity is 11 percent and the cost of debt is 4.5 percent. You wish to maintain a debt-equity ratio of .45. What is the initial cost of the project including the flotation costs?
   a. $138,009
   b. $143,367
   c. $149,422
   d. $154,004
   e. $155,283

IV. ESSAYS

WACC

84. Why is it important for financial decision makers to obtain a good estimate of the firm's cost of capital?

    The student should indicate that making decisions that maximize firm value is not possible unless one employs the appropriate discount rate.

WACC

85. What role does the cost of capital play in the overall financial decision making of the firm's top managers?

    This is a very open-ended question. Students should explain that using the appropriate discount rate in making a capital budgeting decision is crucial to project analysis. Using the wrong discount rate effectively undermines all of the care taken to make sure cash flow estimates are reasonable.

SUBJECTIVE APPROACH

86. Why do you think some managers employ the subjective approach in assigning a discount rate to proposed projects?

    Students should explain that there are practical difficulties involved in developing an appropriate discount rate for each and every project. First, it may be difficult to come up with accurate estimates. Second, while it may be possible to come up with more accurate estimates than the subjective approach provides, it may not be beneficial when compared to the cost of doing so. The subjective approach provides a practical compromise in terms of analysis costs versus the desire to incorporate, at least to a rough degree, the differential risk profiles of the varied investment projects of the firm.

PURE PLAY AND SUBJECTIVE APPROACHES

87. What is the basic difference between the pure play and the subjective approaches? How do you know which approach to use given a particular project?

    The pure play approach uses the cost of capital from another firm that is in the business to which a project is related as the discount rate for the project. This method is used when a project is unrelated to the sponsoring firm's overall operations. The subjective approach adjusts a firm's overall cost of capital to allow for differences in project risk. This method is used to adjust for varying project risk levels when the actual level of the risk cannot be measured effectively at a reasonable cost.

FLOTATION COSTS

88. Suppose your boss comes to you and asks you to re-evaluate a capital budgeting project. The first evaluation was in error, he explains, because it ignored flotation costs. To correct for this, he asks you to evaluate the project using a higher cost of capital. Is his approach correct? Why or why not?

    He is confused about the cost of capital that is appropriate for a project. It depends on the use of the funds, not the source. It would be more appropriate to determine the level of flotation costs and add those to the cost of the project.

CAPITAL BUDGETING, EMH, AND COST OF CAPITAL

89. Explain the interactions between market efficiency, capital budgeting, and the cost of capital.

    This question will likely take good students some time to complete. They should explain how using the correct cost of capital is crucial in making capital budgeting decisions. Also, the cost of capital is determined by the use of funds, not the source, so the riskiness of the project is important. Furthermore, in an efficient market, project NPVs will be zero, on average. Thus, managers should carefully examine projects with positive NPVs to determine their source of value and to determine the reasonableness of the cash flow estimates underlying the calculation. Finally, if markets are efficient, then the cost of capital observed in the market is a "fair" estimate of the return required by the firm's investors.

RETAINED EARNINGS

90. Suppose your firm is going to finance a new project solely with retained earnings. Your boss claims that since the earnings are already being retained and that since no outside financing is required, the project should be evaluated at the risk-free rate of return. Is this appropriate? Are retained earnings risk-free? Why or why not?

    Students should recognize that retained earnings essentially belong to equity holders and that the appropriate cost is the cost of equity. Moreover, the boss is basing the cost of capital on the source of funds, not the use.