

1. **(Related to Checkpoint 14.1) (Weighted average cost of capital)** The target capital structure for QM Industries is 39% common stock, 15% preferred stock, and 46% debt. If the cost of common equity for the firm is 17.2%, the cost of preferred stock is 10.9%, the before-tax cost of debt is 12.5%, and the firm's tax rate is 35%, what is QM's weighted average cost of capital?


QM's WACC is %. (Round to three decimal places.)

2. **(Weighted average cost of capital)** Crypton Electronics has a capital structure consisting of 45% common stock and 55% debt. A debt issue of \$1,000 par value, 6.4% bonds that mature in 10 years and pay annual interest will sell for \$979. Common stock of the firm is currently selling for \$25 per share and the firm expects to pay a \$2.17 dividend next year. Dividends have grown at 5.4% per year and are expected to continue to do so for the foreseeable future. What is Crypton's weighted average cost of capital where the firm's tax rate is 30%?

Crypton's cost of capital is %. (Round to three decimal places.)

3. **(Weighted average cost of capital)** The target capital structure for Jowers Manufacturing is 45% common stock, 18% preferred stock, and 33% debt. If the cost of common equity for the firm is 20.2%, the cost of preferred stock is 12.3%, and the before-tax cost of debt is 9.9%, what is Jowers' weighted average cost of capital? The firm's tax rate is 34%.

Jowers' WACC is %. (Round to three decimal places.)

4. **(Weighted average cost of capital)** As a member of the Finance Department of Ranch Manufacturing, your supervisor has asked you to compute the appropriate discount rate to evaluating the purchase of new packaging equipment for the plant. Under the assumption firm's present capital structure reflects the appropriate mix of capital sources for the firm, determined the market value of the firm's capital structure as follows: 
- To finance the purchase, Ranch Manufacturing will sell 10-year bonds paying 7.1% per year market price of \$1,036. Preferred stock paying a \$1.95 dividend can be sold for \$25.16. Common stock for Ranch Manufacturing is currently selling for \$54.19 per share and the firm paid dividend last year. Dividends are expected to continue growing at a rate of 5.1% per year into the indefinite future. If the firm's tax rate is 30%, what discount rate should you use to evaluate the equipment purchase?

Ranch Manufacturing's WACC is %. (Round to three decimal places.)

Data Table

Source of Capital	Market Values
Bonds	\$4,000,000
Preferred stock	\$2,100,000
Common stock	\$5,600,000

5. **(Related to Checkpoint 15.3) (EBIT-EPS analysis)** Abe Forrester and three of his friends in college have interested a group of venture capitalists in backing their business idea. The proposed operation would consist of a series of retail outlets to distribute and service a full line of vacuum cleaners and accessories. These stores would be located in Dallas, Houston, and San Antonio. To finance the new venture two plans have been proposed:
- Plan A is an all-common-equity structure in which \$2.1 million dollars would be raised by issuing 82,000 shares of common stock.
 - Plan B would involve issuing \$1.1 million dollars in long-term bonds with an effective interest rate of 12.3% plus \$1.0 million would be raised by selling 41,000 shares of common stock. The funds raised under Plan B have no fixed maturity date, in that this amount of financial leverage is considered a permanent part of the firm's capital structure.
- Abe and his partners plan to use a 40% tax rate in their analysis, and they have hired you on a consulting basis to do the following:
- Find the EBIT indifference level associated with the two financing plans.
 - Prepare a pro forma income statement for the EBIT level solved for in Part a. that shows that the results will be the same regardless whether Plan A or B is chosen.

a. Find the EBIT indifference level associated with the two financing plans.

The EBIT indifference level associated with the two financing plans is \$. (Round to the nearest dollar.)

b. Prepare a pro forma income statement for the EBIT level solved for in Part a. that shows that the results will be the same regardless whether Plan A or B is chosen.

Complete the segment of the income statement for Plan A below: (Round income statement amounts to the nearest dollar except the EPS to the nearest cent.)

Stock Plan

EBIT	\$	<input type="text"/>
Less: Interest Expense		<input type="text"/>
Earnings Before Taxes	\$	<input type="text"/>
Less: Taxes at 40%		<input type="text"/>
Net Income	\$	<input type="text"/>
Number of Common Shares		<input type="text"/>
EPS	\$	<input type="text"/>

Complete the segment of the income statement for Plan B below: (Round income statement amounts to the nearest dollar except the EPS to the nearest cent.)

5.

Bond/Stock Plan

(cont.)

EBIT

\$

Less: Interest Expense

Earnings Before Taxes

\$

Less: Taxes at 40%

Net Income

\$

Number of Common Shares

EPS

\$

6. **(EBIT-EPS analysis)** Three recent graduates of the computer science program at the University of Tennessee are forming a company that will write and distribute new application software for the iPhone. Initially, the corporation will operate in the southern region of Tennessee, Georgia, North Carolina, and South Carolina. A small group of private investors in the Atlanta, Georgia area is interested in financing the startup company and two financing plans have been put forth for their consideration:

- The first (Plan A) is an all-common-equity capital structure. \$2.3 million dollars would be raised by selling common stock at \$10 per common share.
- Plan B would involve the use of financial leverage. \$1.3 million dollars would be raised by selling bonds with an effective interest rate of 10.7% (per annum), and the remaining \$1.0 million would be raised by selling common stock at the \$10 price per share. The use of financial leverage is to be a permanent part of the firm's capitalization, so no fixed maturity date is needed for the bonds. A 34% tax rate is deemed appropriate for the analysis.

- a. Find the EBIT indifference level associated with the two financing plans.
- b. A detailed financial analysis of the firm's prospects suggests that the long-term EBIT will be \$338,000 annually. Taking this into consideration, which plan will generate the higher EBIT-EPS?

- a. Find the EBIT indifference level associated with the two financing plans.

The EBIT indifference level associated with the two financing plans is \$. (Round to the nearest dollar.)

- b. A detailed financial analysis of the firm's prospects suggests that the long-term EBIT will be \$338,000 annually. Taking this into consideration, which plan will generate the higher EBIT-EPS?

Complete the segment of the income statement for Plan A below: (Round income statement amounts to the nearest dollar except the EPS to the nearest cent.)

Stock Plan

EBIT	\$	<input type="text"/>
Less: Interest Expense		<input type="text"/>
Earnings Before Taxes	\$	<input type="text"/>
Less: Taxes at 34%		<input type="text"/>
Net Income	\$	<input type="text"/>
Number of Common Shares		<input type="text"/>
EPS	\$	<input type="text"/>

Complete the segment of the income statement for Plan B below: (Round income statement amounts to the nearest dollar except the EPS to the nearest cent.)

6.

Bond/Stock Plan

(cont.)

EBIT	\$	<input type="text"/>
Less: Interest Expense		<input type="text"/>
Earnings Before Taxes	\$	<input type="text"/>
Less: Taxes at 34%		<input type="text"/>
Net Income	\$	<input type="text"/>
Number of Common Shares		<input type="text"/>
EPS	\$	<input type="text"/>

The plan that will generate the higher EPS is Plan **A**. (Select from the drop-down menu)

1. **(Related to Checkpoint 14.1) (Weighted average cost of capital)** The target capital structure for QM Industries is 43% common stock, 10% preferred stock, and 47% debt. If the cost of common equity for the firm is 17.2%, the cost of preferred stock is 9.2%, the before-tax cost of debt is 10.5%, and the firm's tax rate is 35%, what is QM's weighted average cost of capital?

QM's WACC is %. (Round to three decimal places.)

2. **(Weighted average cost of capital)** Crypton Electronics has a capital structure consisting of 45% common stock and 55% debt. A debt issue of \$1,000 par value, 6.2% bonds that mature in 10 years and pay annual interest will sell for \$973. Common stock of the firm is currently selling for \$25 per share and the firm expects to pay a \$2.28 dividend next year. Dividends have grown at 4.8% per year and are expected to continue to do so for the foreseeable future. What is Crypton's weighted average cost of capital where the firm's tax rate is 30%?

Crypton's cost of capital is %. (Round to three decimal places.)

3. **(Weighted average cost of capital)** The target capital structure for Jowers Manufacturing is 45% common stock, 19% preferred stock, and 36% debt. If the cost of common equity for the firm is 19.1%, the cost of preferred stock is 12.5%, and the before-tax cost of debt is 9.8%, what is Jowers' weighted average cost of capital? The firm's tax rate is 34%.

Jowers' WACC is %. (Round to three decimal places.)

4. **(Weighted average cost of capital)** As a member of the Finance Department of Ranch Manufacturing, your supervisor has asked you to compute the appropriate discount rate to evaluating the purchase of new packaging equipment for the plant. Under the assumption firm's present capital structure reflects the appropriate mix of capital sources for the firm, determined the market value of the firm's capital structure as follows:
- To finance the purchase, Ranch Manufacturing will sell 10-year bonds paying 7.4% per year market price of \$1,062. Preferred stock paying a \$2.02 dividend can be sold for \$24.16. Common stock for Ranch Manufacturing is currently selling for \$54.19 per share and the firm paid dividend last year. Dividends are expected to continue growing at a rate of 5.4% per year into the indefinite future. If the firm's tax rate is 30%, what discount rate should you use to evaluate the equipment purchase?

Ranch Manufacturing's WACC is %. (Round to three decimal places.)

Data Table

Source of Capital	Market Values
Bonds	\$3,600,000
Preferred stock	\$1,700,000
Common stock	\$5,900,000

5.

(Related to Checkpoint 15.2) (EBIT-EPS analysis) Abe Forrester and three of his friends at college have interested a group of venture capitalists in backing their business idea. The operation would consist of a series of retail outlets to distribute and service a full line of vacuum cleaners and accessories. These stores would be located in Dallas, Houston, and San Antonio. To finance the new venture two plans have been proposed:

- Plan A is an all-common-equity structure in which \$2.4 million dollars would be raised by selling 88,000 shares of common stock.
- Plan B would involve issuing \$1.1 million dollars in long-term bonds with an effective interest rate of 11.6% plus \$1.3 million would be raised by selling 44,000 shares of common stock. The funds raised under Plan B have no fixed maturity date, in that this amount of financial leverage is considered a permanent part of the firm's capital structure.

Abe and his partners plan to use a 40% tax rate in their analysis, and they have hired you on a consulting basis to do the following:

- a. Find the EBIT indifference level associated with the two financing plans.
- b. Prepare a pro forma income statement for the EBIT level solved for in Part a. that shows that the results will be the same regardless whether Plan A or B is chosen.

- a. Find the EBIT indifference level associated with the two financing plans.

The EBIT indifference level associated with the two financing plans is \$. (Round to the nearest dollar.)

- b. Prepare a pro forma income statement for the EBIT level solved for in Part a. that shows that the results will be the same regardless whether Plan A or B is chosen.

Complete the segment of the income statement for Plan A below: (Round income statement amounts to the nearest dollar except the EPS to the nearest cent.)

Stock Plan

EBIT	\$	<input type="text"/>
Less: Interest Expense		<input type="text"/>
Earnings Before Taxes	\$	<input type="text"/>
Less: Taxes at 40%		<input type="text"/>
Net Income	\$	<input type="text"/>
Number of Common Shares		<input type="text"/>
EPS	\$	<input type="text"/>

Complete the segment of the income statement for Plan B below: (Round income statement amounts to the nearest dollar except the EPS to the nearest cent.)

5.

Bond/Stock Plan

(cont.)

EBIT	\$	<input type="text"/>
Less: Interest Expense		<input type="text"/>
Earnings Before Taxes	\$	<input type="text"/>
Less: Taxes at 40%		<input type="text"/>
Net Income	\$	<input type="text"/>
Number of Common Shares		<input type="text"/>
EPS	\$	<input type="text"/>

6. **(EBIT-EPS analysis)** Three recent graduates of the computer science program at the University of Tennessee are forming a company that will write and distribute new application software for the iPhone. Initially, the corporation will operate in the southern region of Tennessee, Georgia, North Carolina, and South Carolina. A small group of private investors in the Atlanta, Georgia area is interested in financing the startup company and two financing plans have been put forth for consideration:

- The first (Plan A) is an all-common-equity capital structure. \$2.4 million dollars would be raised by selling common stock at \$20 per common share.
- Plan B would involve the use of financial leverage. \$1.3 million dollars would be raised by selling bonds with an effective interest rate of 11.4% (per annum), and the remaining \$1.1 million would be raised by selling common stock at the \$20 price per share. The use of financial leverage is intended to be a permanent part of the firm's capitalization, so no fixed maturity date is needed for the bonds. A 35% tax rate is deemed appropriate for the analysis.

- a. Find the EBIT indifference level associated with the two financing plans.
- b. A detailed financial analysis of the firm's prospects suggests that the long-term EBIT will be \$327,000 annually. Taking this into consideration, which plan will generate the higher EPS?

- a. Find the EBIT indifference level associated with the two financing plans.

The EBIT indifference level associated with the two financing plans is \$. (Round to the nearest dollar.)

- b. A detailed financial analysis of the firm's prospects suggests that the long-term EBIT will be \$327,000 annually. Taking this into consideration, which plan will generate the higher EPS?

Complete the segment of the income statement for Plan A below: (Round income statement amounts to the nearest dollar except the EPS to the nearest cent.)

Stock Plan

EBIT	\$	<input type="text"/>
Less: Interest Expense		<input type="text"/>
Earnings Before Taxes	\$	<input type="text"/>
Less: Taxes at 35%		<input type="text"/>
Net Income	\$	<input type="text"/>
Number of Common Shares		<input type="text"/>
EPS	\$	<input type="text"/>

Complete the segment of the income statement for Plan B below: (Round income statement amounts to the nearest dollar except the EPS to the nearest cent.)

6.

Bond/Stock Plan

(cont.)

EBIT	\$	<input type="text"/>
Less: Interest Expense		<input type="text"/>
Earnings Before Taxes	\$	<input type="text"/>
Less: Taxes at 35%		<input type="text"/>
Net Income	\$	<input type="text"/>
Number of Common Shares		<input type="text"/>
EPS	\$	<input type="text"/>

The plan that will generate the higher EPS is Plan **A**. (Select from the drop-down menu)