

**Student:** KEITH SIMPSON

**Date:** 10/26/12

**Time:** 9:47 AM

**Instructor:** UOP Admin

**Course:** FIN/370--10-09-12--section  
1111MCGENS

**Book:** Titman/Martin/Keown: Financial  
Management: Principles and Applications

**Assignment:** Week Four Problems

1. **(Related to Checkpoint 14.1) (Weighted average cost of capital)** The target capital structure for QM Industries is 36% common stock, 15% preferred stock, and 49% debt. If the cost of common equity for the firm is 17.5%, the cost of preferred stock is 9.3%, the before-tax cost of debt is 7.9%, 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 36% common stock and 64% debt. A debt issue of \$1,000 par value, 6.1% bonds that mature in 15 years and pay annual interest will sell for \$972. Common stock of the firm is currently selling for \$29.61 per share and the firm expects to pay a \$2.34 dividend next year. Dividends have grown at the rate of 4.9% per year and are expected to continue to do so for the foreseeable future. What is Crypton's 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 55% common stock, 10% preferred stock, and 35% debt. If the cost of common equity for the firm is 20.8%, the cost of preferred stock is 12.5%, and the before-tax cost of debt is 9.7%, what is Jowers' cost of capital? The firm's tax rate is 34%.

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

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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 use when evaluating the purchase of new packaging equipment for the plant. Under the assumption that the firm's present capital structure reflects the appropriate mix of capital sources for the firm, you have 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 at the market price of \$1,027. Preferred stock paying a \$1.92 dividend can be sold for \$25.92. Common stock for Ranch Manufacturing is currently selling for \$54.98 per share and the firm paid a \$3.08 dividend last year. Dividends are expected to continue growing at a rate of 5.2% 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

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Source of Capital	Market Values
Bonds	\$3,500,000
Preferred stock	\$2,100,000
Common stock	\$5,800,000

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5. **(Related to Checkpoint 15.2) (EBIT-EPS analysis)** Abe Forrester and three of his friends from 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 \$2.4 million dollars would be raised by selling 90,000 shares of common stock.
- Plan B would involve issuing \$1.3 million dollars in long-term bonds with an effective interest rate of 12.4% plus \$1.1 million would be raised by selling 45,000 shares of common stock. The debt 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 35% 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 EPS will be the same regardless whether Plan A or B is chosen.

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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 EPS 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 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.)

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5.

**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"/>

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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 \$10 per common share.
- Plan B would involve the use of financial leverage. \$1.2 million dollars would be raised by selling bonds with an effective interest rate of 10.5% (per annum), and the remaining \$1.2 million would be raised by selling common stock at the \$10 price per share. The use of financial leverage is considered to be a permanent part of the firm's capitalization, so no fixed maturity date is needed for the analysis. A 30% 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 above \$314,000 annually. Taking this into consideration, which plan will generate the higher EPS?

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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 above \$314,000 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 30%		<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.)

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6. **Bond/Stock Plan**

(cont.)	EBIT	\$	<input type="text"/>
	Less: Interest Expense		<input type="text"/>
	Earnings Before Taxes	\$	<input type="text"/>
	Less: Taxes at 30%		<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  . (Select from the drop-down menu.)