

Problem 2-4

Talbot Enterprises recently reported an EBITDA of \$8 million and net income of \$2.4 million. It had \$2.0 million of interest expense, and its corporate tax rate was 40%. What was its charge for depreciation amortization?

Problem 3-11

Complete the balance sheet and sales information in the table that follows for J. White Industries using the following financial data:

Total assets turnover: 1.5

Gross profit margin on sales: $(\text{Sales} - \text{Cost of goods sold}) / \text{Sales} = 25\%$

Total liabilities-to-assets ratio: 40%

Quick ratio: 0.80

Days sales outstanding (based on 365-day year): 36.5 days

Inventory turnover ratio: 3.75

Partial Income**Statement
Information**

Sales

Cost of goods sold

Balance Sheet

Cash

Accounts receivable

Inventories

Fixed Assets

Total Assets

Accounts Payable

Long-term debt

Common stock

Retained earnings

Total liabilities & equity

50,000

\$400,000

(12-1) Broussard Skateboard's sales are expected to increase by 15% from \$8 million in 2013 to \$9.2 million in 2014. Its assets totaled \$5 million at the end of 2013. Broussard is already at full capacity, so its assets must grow at the same rate as projected sales. At the end of 2013, current liabilities were \$1.4 million, consisting of \$450,000 of accounts payable, \$500,000 of notes payable, and \$450,000 of accruals. The after-tax profit margin is forecasted to be 6%, and the forecasted payout ratio is 40%. Use the AFN equation to forecast Broussard's additional funds needed for the coming year.

(12-2) Refer to Problem 12-1. What would be the additional funds needed if the company's year-end 2013 assets had been \$7 million? Assume that all other numbers, including sales, are the same as in Problem 12-1 and that the company is operating at full capacity. Why is this AFN different from the one you found in Problem 12-1? Is the company's "capital intensity" ratio the same or different?

(13-4) What are some actions an entrenched management might take that would harm shareholders?

(13-5) How is it possible for an employee stock option to be valuable even if the firm's stock price fails to meet shareholders' expectations?

(4-8) Annuity Payment and EAR You want to buy a car, and a local bank will lend you \$20,000. The loan would be fully amortized over 5 years (60 months), and the nominal interest rate would be 12%, with interest paid monthly. What is the monthly loan payment? What is the loan's EFF%?

(4-13) Present Value of an Annuity Find the *present value* of the following *ordinary annuities* (see the *Notes* to Problem 4-12).

- \$400 per year for 10 years at 10%
- \$200 per year for 5 years at 5%
- \$400 per year for 5 years at 0%
- Now rework parts a, b, and c assuming that payments are made at the *beginning* of each year; that is, they are *annuities due*.

(4-21) Growth Rates Sales for Hanebury Corporation's just-ended year were \$12 million. Sales were \$6 million 5 years earlier.

- At what rate did sales grow?
- Suppose someone calculated the sales growth for Hanebury in part a as follows: "Sales doubled in 5 years. This represents a growth of 100% in 5 years; dividing 100% by 5 results in an estimated growth rate of 20% per year." Explain what is wrong with this calculation.

(5-9) Bond Valuation and Interest Rate Risk The Garraty Company has two bond issues outstanding. Both bonds pay \$100 annual interest plus \$1,000 at maturity. Bond L has a maturity of 15 years, and Bond S has a maturity of 1 year.

- What will be the value of each of these bonds when the going rate of interest is (1) 5%, (2) 8%, and (3) 12%? Assume that there is only one more interest payment to be made on Bond S.
- Why does the longer-term (15-year) bond fluctuate more when interest rates change than does the shorter-term bond (1 year)?

(5-13) Yield to Maturity and Current Yield You just purchased a bond that matures in 5 years. The bond has a face value of \$1,000 and has an 8% annual coupon. The bond has a current yield of 8.21%. What is the bond's yield to maturity?

(6-6) Expected Returns: Discrete Distribution

The market and Stock J have the following probability distributions:

Probability	r_M	r_J
0.3	15%	20%
0.4	9	5
0.3	18	12

- Calculate the expected rates of return for the market and Stock J.
- Calculate the standard deviations for the market and Stock J.

(6-8) Required Rate of Return As an equity analyst you are concerned with what will happen to the required return to Universal Toddler Industries's stock as market conditions change. Suppose $r_{RF} = 5\%$, $r_M = 12\%$, and $b_{UTI} = 1.4$.

- Under current conditions, what is r_{UTI} , the required rate of return on UTI stock?
- Now suppose r_{RF} (1) increases to 6% or (2) decreases to 4%. The slope of the SML remains constant. How would this affect r_M and r_{UTI} ?
- Now assume r_{RF} remains at 5% but r_M (1) increases to 14% or (2) falls to 11%. The slope of the SML does not remain constant. How would these changes affect r_{UTI} ?

(7-17) Value of Operations Kendra Enterprises has never paid a dividend. Free cash flow is projected to be \$80,000 and \$100,000 for the next 2 years, respectively; after the second year, FCF is expected to grow at a constant rate of 8%. The company's weighted average cost of capital is 12%.

- What is the terminal, or horizon, value of operations? (*Hint: Find the value of all free cash flows beyond Year 2 discounted back to Year 2.*)
- Calculate the value of Kendra's operations.

(8-3) Black-Scholes Model Assume that you have been given the following information on Purcell Industries:

Current stock price = \$15

Time to maturity of option = 6 months

Variance of stock return = 0.12

$d_1 = 0.24495$

$d_2 = 0.00000$

Strike price of option = \$15

Risk-free rate = 6%

$N(d_1) = 0.59675$

$N(d_2) = 0.50000$

According to the Black-Scholes option pricing model, what is the option's value?

(9-7) WACC Shi Importers's balance sheet shows \$300 million in debt, \$50 million in preferred stock, and \$250 million in total common equity. Shi's tax rate is 40%, $r_d = 6\%$, $r_{ps} = 5.8\%$, and $r_s = 12\%$. If Shi has a target capital structure of 30% debt, 5% preferred stock, and 65% common stock, what is its WACC?

(9-11) Cost of Equity Radon Homes's current EPS is \$6.50. It was \$4.42 5 years ago. The company pays out 40% of its earnings as dividends, and the stock sells for \$36.

- Calculate the historical growth rate in earnings. (*Hint: This is a 5-year growth period.*)
- Calculate the *next* expected dividend per share, D_1 . (*Hint: $D_0 = 0.4(\$6.50) = \2.60 .*) Assume that the past growth rate will continue.
- What is Radon's cost of equity, r_s ?