

**HOMEWORK ASSIGNMENT I**

**Chapter 27**

**Problem 1.27      Calculating Cycles**

Consider the following financial statement information for the Young Riders Corp.:

Item	Beginning	Ending
Inventory	\$ 20,037	\$ 22,531
Accounts receivable	24,025	28,889
Accounts payable	18,272	20,986
Net sales	\$ 307,500	
Cost of goods sold	163,102	

Calculate the operating and cash cycles.

**Problem 2.27      Calculating Cash Collections**

The Sunlife Co. has projected the following quarterly sales amounts for the coming year:

	Q1	Q2	Q3	Q4
Sales	\$1,100	\$830	\$1,310	\$1,530

- a. Accounts receivable at the beginning of the year are \$375. Sunlife has a 45-day collection period. Calculate cash collections in each of the four quarters by completing the following:

	Q1	Q2	Q3	Q4
Beginning receivables	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
Sales	1,100.00	830.00	1,310.00	1,530.00
Cash collections	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Ending receivables	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>

- b. Accounts receivable at the beginning of the year are \$375. Sunlife has a 60-day collection period. Calculate cash collections in each of the four quarters by completing the following:

	Q1	Q2	Q3	Q4
Beginning receivables	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
Sales	1,100.00	830.00	1,310.00	1,530.00
Cash collections	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Ending receivables	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>

c.

- Accounts receivable at the beginning of the year are \$375. Sunlife has a 30-day collection period. Calculate cash collections in each of the four quarters by completing the following:

	Q1	Q2	Q3	Q4
Beginning receivables	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
Sales	1,100.00	830.00	1,310.00	1,530.00
Cash collections	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Ending receivables	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>

### Problem 3.27 *Calculating Payments*

The Travel Corp.'s purchases from suppliers in a quarter are equal to 75 percent of the next quarter's forecast sales. The payables period is 60 days. Wages, taxes, and other expenses are 25 percent of sales, and interest and dividends are \$75 per quarter. No capital expenditures are planned.

Here are the projected quarterly sales:

	Q1	Q2	Q3	Q4
Sales	\$2,250	\$2,550	\$2,250	\$1,950

Sales for the first quarter of the following year are projected at \$2,580. Calculate the company's cash outlays by completing the following:

	Q1	Q2	Q3	Q4
Payment of accounts	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
Wages, taxes, and other expenses	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Long-term financing expenses (interest and dividends)				
Total	\$	\$	\$	\$

**Problem 4.27      Calculating cash outflows**

Lewellen Products has projected the following sales for the coming year:

	Q1	Q2	Q3	Q4
Sales	\$880	\$960	\$920	\$1,020

Sales in the year following this one are projected to be 15 percent greater in each quarter.

- a. Calculate payments to suppliers assuming that Lewellen places orders during each quarter equal to 30 percent of projected sales for the next quarter. Assume that the company pays immediately.

	Q1	Q2	Q3	Q4
Payment of accounts	\$	\$	\$	\$

- b. Calculate payments to suppliers assuming a 90-day payables period.

	Q1	Q2	Q3	Q4
Payment of accounts	\$	\$	\$	\$

- c. Calculate payment to suppliers assuming a 60-day payables period.

	Q1	Q2	Q3	Q4
Payment of accounts	\$	\$	\$	\$

## Chapter 29

### *Problem 1.29          ACP and Accounts Receivable*

Kyoto Joe Inc. sells earnings forecasts for Japanese securities. Its credit terms are 2/5, net 50. Based on experience, 86 percent of all customers will take the discount.

- a. What is the average collection period for Kyoto Joe?
  
- b. If Kyoto Joe sells 1,410 forecasts every month at a price of \$2,400 each, what is its average balance sheet amount in accounts receivable?

### *Problem 2.29          Evaluating a credit policy*

Great Lakes is a wholesaler that stocks engine components and test equipment for the commercial aircraft industry. A new customer has placed an order for eight high-bypass turbine engines, which increase fuel economy. The variable cost is \$2.3 million per unit, and the credit price is \$2.475 million each. Credit is extended for one period, and based on historical experience, payment for about 1 out of every 250 such orders are never collected. The required return is 2.6 percent per period.

- a-1. Assuming that this is a one-time order, what is the NPV per unit?
  
- a-2. Should the order be filled?
  
- b. What is the break-even probability of default for a one-time order?
  
- c-1. Suppose that customers who don't default become repeat customers and place the same order every period forever. Further assume that repeat customers never default. What is the NPV per unit?
  
- c-2. Should the order be filled if the customer will become a repeat customer?
  
- c-3. What is the break-even probability of default assuming that the customer will become a repeat customer?

**Problem 3.29****Credit Policy Evaluation**

White Knight Inc. is considering a change in its cash-only sales policy. The new terms of sale would be net one month. The required return is 0.80 percent per month. Consider the following additional information.

	Current Policy	New Policy
Price per unit	\$ 940	\$ 940
Cost per unit	\$ 740	\$ 740
Unit sales per month	1,000	1,080

Calculate the NPV of the decision to switch.

**Problem 4.29****Credit Policy Evaluation**

Happy Times currently has an all-cash policy. It is considering making a change in the credit policy by going to terms of net 30 days. The required return is 1.65 percent per month.

	Current Policy	New Policy
Price per unit	\$ 365	\$ 365
Cost per unit	\$ 300	\$ 304
Unit sales per month	1,245	1,405

- a. Calculate the NPV for the change in the credit policy?
- b. Based on the NPV calculated above, what do you recommend?

**Problem 5.29****Break-even Quantity**

The Prince Corp. is considering a change in its cash-only policy. The new terms would be net one period. The required return is 2.0 percent per period. Consider the following additional information.

	Current Policy	New Policy
Price per unit	\$ 53	\$ 55
Cost per unit	\$ 31	\$ 31
Unit sales per month	2,150	2,275

What is the break-even quantity for the new credit policy?

## Chapter 13

### *Problem 1.13 Finding the Capital Structure*

Wonderful World has a WACC of 9.7 percent. The company's cost of equity is 13 percent, and its cost of debt is 7.7 percent. The tax rate is 38 percent. What is Wonderful World's debt-to-equity ratio?

### *Problem 2.13 Finding the Capital Structure*

Star Inc. has a target debt-to-equity ratio of 0.62. Its WACC is 11.9 percent, and the tax rate is 35 percent.

- a. If Star's cost of equity is 15 percent, what is its pre-tax cost of debt?
- b. If instead you know that the after-tax cost of debt is 7.1 percent, what is the cost of equity?

### *Problem 3.13 SML and WACC*

An all-equity firm is considering the following projects:

Project	Beta	Expected return
W	0.84	12.3%
X	0.91	11.1
Y	1.48	14.8
Z	1.54	17.5

The T-bill rate is 6 percent, and the expected return on the market is 13 percent.

- a. Which projects have a higher expected return than the firm's 13 percent cost of capital?
- b. Which projects should be accepted?
- c. Which projects would be incorrectly accepted or rejected if the firm's overall cost of capital was used as a hurdle rate?

## Chapter 16

### *Problem 1. 16. EBIT and Leverage*

Kolby Corp. is comparing two different capital structures. Plan I would result in 1,300 shares of stock and \$69,350 in debt. Plan II would result in 2,400 shares of stock and \$29,200 in debt. The interest rate on the debt is 10 percent.

- a. Ignoring taxes, compare both of these plans to an all-equity plan assuming that EBIT will be \$9,000. The all-equity plan would result in 3,200 shares of stock outstanding. What is the EPS for each of these plans?
- b. In part (a) what are the break-even levels of EBIT for each plan as compared to that for an all-equity plan?
- c. Ignoring taxes, at what level of EBIT will EPS be identical for Plans I and II?
- d-1. Assuming that the corporate tax rate is 40 percent, what is the EPS of the firm for each of these plans?
- d-2. Assuming that the corporate tax rate is 40 percent, what are the break-even levels of EBIT for each plan as compared to that for an all-equity plan?
- d-3. Assuming that the corporate tax rate is 40 percent, when will EPS be identical for Plans I and II?

**Problem 2.16**      **Break-Even EBIT**

North East Corp. is comparing two different capital structures, an all-equity plan (plan I) and a levered plan (plan II). Under plan I, North East would have 275,000 shares of stock outstanding. Under plan II, there would be 195,000 shares of stock outstanding and \$3.0 million in debt outstanding. The interest rate on the debt is 9 percent and there are no taxes.

- a.** If EBIT is \$760,000, calculate the EPS for each plan.
  
- b.** If EBIT is \$1,520,000, calculate the EPS for each plan.
  
- c.** Calculate the break-even EBIT.