

# The 5th Wave

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"I just don't know where the money's going."

# **MISCELLANEOUS CONSIDERATIONS**

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# **FINANCIAL STATEMENT ANALYSIS**

# **MISCELLANEOUS CONSIDERATIONS**

**Prompt Payment Discounts**

**Inventory Valuation**

**Price-Level Accounting**

**Currency Fluctuations**

# **PROMPT PAYMENT DISCOUNTS**

## **NET METHOD:**

**Used when most customers receive discount**

**Sale recorded at discounted amount**

**Any additional receipts recorded as  
"Other Income"**

## **GROSS METHOD:**

**Used when few customers receive discount**

**Sale recorded at full value amount**

**Any discount taken recorded as  
"Discount Allowed Expense"**

# PROMPT PAYMENT DISCOUNTS - EXAMPLES -

Full Value of Sale on Accounts Receivable = \$1,000  
Prompt Payment Discount = 3% = \$30

## NET METHOD:

### INITIAL TRANSACTION:

|                         |        |        |
|-------------------------|--------|--------|
| Dr: Accounts Receivable | \$ 970 |        |
| Cr: Sales Revenue       |        | \$ 970 |

### PAYMENT RECEIVED WITHOUT DISCOUNT:

|                         |         |        |
|-------------------------|---------|--------|
| Dr: Cash                | \$1,000 |        |
| Cr: Accounts Receivable |         | \$ 970 |
| Cr: Other Income        |         | \$ 30  |

## GROSS METHOD:

### INITIAL TRANSACTION:

|                         |         |         |
|-------------------------|---------|---------|
| Dr: Accounts Receivable | \$1,000 |         |
| Cr: Sales Revenue       |         | \$1,000 |

### PAYMENT RECEIVED WITH DISCOUNT:

|                              |        |         |
|------------------------------|--------|---------|
| Dr: Cash                     | \$ 970 |         |
| Dr: Discount Allowed Expense | \$ 30  |         |
| Cr: Accounts Receivable      |        | \$1,000 |

# **INVENTORY VALUATION**

## **Two Basic Approaches**

**FIFO**

**First-in, First-out**

**LIFO**

**Last-in, First-out**

# INVENTORY VALUATION

## Periodic Inventory Method (example, page 189, Riggs)

**FIGURE 9-3 FIFO and LIFO Conventions: Cost of Goods Sold Determined by End-of-Period Adjustment (July)**

| Purchases |                     |            |                   | Sales |            |
|-----------|---------------------|------------|-------------------|-------|------------|
| Date      | Quantity<br>(Units) | Price/Unit | Purchase<br>Value | Date  | Units      |
| 7/2       | 200                 | \$1.00     | \$ 200            | 7/3   | 80         |
|           |                     |            |                   | 7/5   | 120        |
| 7/14      | 300                 | \$1.05     | 315               | 7/9   | 160        |
|           |                     |            |                   | 7/13  | 100        |
| 7/21      | 200                 | \$1.10     | 220               | 7/17  | 100        |
|           |                     |            |                   | 7/18  | 80         |
| 7/27      | 250                 | \$1.12     | 280               | 7/22  | 100        |
|           | <u>950</u>          |            | <u>\$1015</u>     | 7/26  | 80         |
|           |                     |            |                   | 7/29  | <u>100</u> |
|           |                     |            |                   |       | 920        |

### Valuation of Ending Inventory\*

| FIFO       |            |              | LIFO       |            |              |
|------------|------------|--------------|------------|------------|--------------|
| Units      | Price/Unit | Value        | Units      | Price/Unit | Value        |
| 250        | \$1.12     | \$280        | 300        | \$0.95     | \$285        |
| 80         | 1.10       | 88           | 30         | 1.00       | 30           |
| <u>330</u> |            | <u>\$365</u> | <u>330</u> |            | <u>\$315</u> |

### Valuation of Cost of Goods Sold\*

|                        | FIFO          | LIFO          |
|------------------------|---------------|---------------|
| Opening Inventory      | \$285         | \$285         |
| plus: Purchases        | 1015          | 1015          |
| less: Ending inventory | <u>368</u>    | <u>315</u>    |
| Cost of goods sold     | <u>\$ 932</u> | <u>\$ 985</u> |

\* Assumes opening inventory was 300 units a \$0.95 per unit or \$285.

**(See also Perpetual Inventory Method, page 190, Riggs)**

# **PRICE-LEVEL ACCOUNTING**

- **Pertains to a single currency only**
- **Pertains to Financial Statements, not individual transactions**
- **Traditional convention is one of "stable money"**
- **Uses an index to adjust Financial Statement values for inflation/ deflation**
- **Common in some foreign countries, but not the United States**



# PRICE-LEVEL ACCOUNTING

(example, page 195, Riggs)

**FIGURE 9-5 Illustration of Revaluation of an Asset in Constant Purchasing Power**

|  | Current<br>Year | Year 3 | Year 2 | Year 1 | Year 0 |
|--|-----------------|--------|--------|--------|--------|
| Plant site valued<br>at historical cost<br>(\$000)     | \$2000          | \$2000 | \$2000 | \$2000 | \$2000 |
| Approximate annual<br>inflation                        | 9%              | 10%    | 12%    | 8%     | —      |
| General price index                                    | 145             | 133    | 121    | 108    | 100    |
| Revalued plant site<br>in constant<br>purchasing power |                 |        |        |        |        |
| → in current dollars                                   | \$2000          | \$1834 | \$1669 | \$1490 | \$1379 |
| → in year 0 dollars                                    | \$2900          | \$2660 | \$2420 | \$2160 | \$2000 |

**Current Dollars:**

**Year 4 = \$2000**

**Year 3 = Year 4 / 1.09**

**Year 2 = Year 3 / 1.10**

**Year 1 = Year 2 / 1.12**

**Year 0 = Year 1 / 1.08**

**Year 0 Dollars:**

**Year 0 = \$2,000**

**Year 1 = Year 0 \* 1.08**

**Year 2 = Year 0 \* 1.21**

**Year 3 = Year 0 \* 1.33**

**Year 4 = Year 0 \* 1.45**

# **CURRENCY FLUCTUATIONS**

- **Pertains to transactions involving two different currencies**
- **If Cash transaction, spot exchange rate on the date of transaction used**
- **If Accounts Receivable transaction, there may be a gain or loss resulting from currency fluctuations between the times of purchase and payment**

# **CURRENCY FLUCTUATIONS - EXAMPLES -**

## **INITIAL TRANSACTION IN DOLLARS:**

|                                |                  |                  |
|--------------------------------|------------------|------------------|
| <b>Dr: Accounts Receivable</b> | <b>\$400,000</b> |                  |
| <b>Cr: Sales</b>               |                  | <b>\$400,000</b> |

## **FOREIGN CURRENCY WEAK AGAINST THE DOLLAR:**

|                                   |                  |                  |
|-----------------------------------|------------------|------------------|
| <b>Dr: Cash</b>                   | <b>\$387,500</b> |                  |
| <b>Dr: Currency Exchange Loss</b> | <b>\$ 12,500</b> |                  |
| <b>Cr: Accounts Receivable</b>    |                  | <b>\$400,000</b> |

## **FOREIGN CURRENCY STRONG AGAINST THE DOLLAR:**

|                                   |                  |                  |
|-----------------------------------|------------------|------------------|
| <b>Dr: Cash</b>                   | <b>\$404,000</b> |                  |
| <b>Cr: Accounts Receivable</b>    |                  | <b>\$400,000</b> |
| <b>Cr: Currency Exchange Gain</b> |                  | <b>\$ 4,000</b>  |

# **FINANCIAL STATEMENT ANALYSIS**

**aka**

# **RATIO ANALYSIS**

# **LIQUIDITY RATIOS**

**ability to meet obligations as they come due**

**• • • • •**

## **CURRENT RATIO**

**current assets / current liabilities**

## **QUICK RATIO (aka ACID TEST)**

**(cash + marketable securities + accounts receivable)  
÷ current liabilities**

**also**

**(current assets - inventories) ÷ current liabilities**

# WORKING CAPITAL UTILIZATION

current asset management efficiency and effectiveness

## ACCOUNTS RECEIVABLE COLLECTION PERIOD:

accounts receivable / average sales per day

## INVENTORY TURNOVER:

cost of goods sold / inventory

## ACCOUNTS PAYABLE PAYMENT PERIOD:

$(\text{accounts payable}) * (365) / \text{cost of sales}$   
*OR*  $(\text{accounts payable}) * (365) / \text{cost of goods sold}$

*sales firm*

*mfq firm*

## WORKING CAPITAL TURNOVER:

sales / average working capital

# **CAPITAL STRUCTURE**

**how the company is financed**

**TOTAL DEBT TO OWNERS' EQUITY:**

**total liabilities / total owners' equity**

**TOTAL DEBT TO TOTAL ASSETS:**

**total liabilities / total assets**

**LONG-TERM DEBT TO TOTAL CAPITALIZATION:**

**noncurrent liabilities /  
(noncurrent liabilities + owners' equity)**

**TIMES INTEREST EARNED:**

**earnings before interest and taxes /  
annual interest expense**

# **PROFITABILITY RATIOS**

rate at which the firm is earning financial returns

## **RETURN ON SALES:**

net income / total sales

## **RETURN ON EQUITY:**

net income / average owners' equity

## **RETURN ON ASSETS:**

earnings before interest and taxes / average assets



# **INVESTMENT RATIOS**

**for individual investment purposes  
(NOT Financial Statement Analysis Ratios)**

## **EARNINGS PER SHARE:**

**net income /  
shares of common stock outstanding**

## **BOOK VALUE PER SHARE:**

**shareholders' equity /  
number of shares of stock outstanding**

## **DIVIDENDS PER SHARE:**

**dividends per share declared**

## **PAYOUT RATIO:**

**dividends per share / earnings per share**

## **PRICE/EARNINGS RATIO:**

**market price per share / earnings per share**

## **YIELD:**

**dividends per share / market price per share**

page 201, #9.16: The exchange rate between country G currency and country H currency is 3:1. If this exchange rate moves over time to 5:1, has G currency appreciated or depreciated with respect to H currency?

*An exchange rate between G and H of 3:1 means that 3 units of G currency purchase 1 unit of H currency.*

*An exchange rate between G and H of 5:1 means that 5 units of G currency purchase 1 unit of H currency.*

*Since the number of G currency units required to purchase 1 unit of H currency has **INCREASED**,*

*the G currency is said to have **DEPRECIATED** with respect to the H currency.*

page 203, #9.7, part b: The Baum Corporation uses the net method of accounting for cash discounts allowed to its customers. Record in T-account format:

- b) Receipt of \$1,200 from customer 73 in full payment of her invoice; customer 73 did not take the 2 percent cash discount as she did not pay promptly.

*The discount to be allowed for prompt payment was  
2% of \$1,200 = \$24,*

*so that the Sale was recorded at  $(\$1,200 - 24) = \$1,176$ .*

*Thus the journal entries on receipt of the \$1,200 would now be*

|                                |                |                |
|--------------------------------|----------------|----------------|
| <i>Dr: Cash</i>                | <i>\$1,200</i> |                |
| <i>Cr: Accounts receivable</i> |                | <i>\$1,176</i> |
| <i>Cr: Other income</i>        |                | <i>\$ 24</i>   |

*and the T-account entries would be*

|                    |                                   |                            |
|--------------------|-----------------------------------|----------------------------|
| <u><i>Cash</i></u> | <u><i>Accounts Receivable</i></u> | <u><i>Other Income</i></u> |
| <i>\$1,200  </i>   | <i>  \$1,176</i>                  | <i>  \$ 24</i>             |

**page 205, #9.14:** Emmet Consulting is based in country S but performs consulting services in many countries, including country T. For work performed in February for a client in country T, Emmet invoices the customer 10,000 units of country T currency. This customer pays the invoice five months later, in July. Currency exchange rates in the two months are:

**February: 0.5 units of currency S = 1 unit of currency T**

**July: 0.7 units of currency S = 1 unit of currency T**

**Show in T-account format (assuming Emmet maintains its financial records in currency S):**

**a) the revenue earned in February**

**b) the cash received in July**

- a) *In February, the billing was T\$ 10,000. With an exchange rate of  $0.5S = 1.0T$ ,  
 $T\$ 10,000(0.5) = S\$ 5,000$*

*Thus the journal entries would be*

*Dr: Accounts receivable                      S\$ 5,000  
       Cr: Sales    S\$ 5,000*

*and the T-account entries would be*

|                            |              |
|----------------------------|--------------|
| <u>Accounts Receivable</u> | <u>Sales</u> |
| S\$ 5,000                  | S\$ 5,000    |

- b) *In July, the exchange rate was  $0.7S = 1.0T$ , so the receipt was*

$$T\$ 10,000(0.7) = S\$ 7,000,$$

*resulting in a currency exchange gain of  
 $S\$ (7,000-5,000) = S\$ 2,000$ .*

*Thus the journal entries would be*

*Dr: Cash    S\$ 7,000  
       Cr: Accounts receivable                      S\$ 5,000  
       Cr: Foreign currency exchange gain      S\$ 2,000*

*and the T-account entries would be*

|             |                      |                            |
|-------------|----------------------|----------------------------|
| <u>Cash</u> | <u>Exchange Gain</u> | <u>Accounts Receivable</u> |
| S\$ 7,000   | S\$ 2,000            | S\$ 5,000                  |

**page 241, #10.21: Explain why price/earnings (P/E) are a better measure of the relative value of common stock securities than are the absolute prices of the securities.**

*P/E ratio = market price / earnings per share*

*The number of shares outstanding will be a function of*

- (1) prices at which shares were sold in earlier issues, and*
- (2) additional shares that may have been granted (e.g., as stock dividends or as stock splits)*

*Since (1) and (2) will vary from one company to another, they are not very good indicators of RELATIVE stock value.*

*A high P/E ratio has historically been an indicator that investors are willing to bid the price up based on future company value.*

**page 241, #10.22: What effect does the action of declaring and paying cash dividends on common stock have on the current ratio and the total debt to owners' equity ratio of the company?**

*Current Ratio = Current Assets / Current Dividends*

*Paying cash dividends will decrease cash, and thus will decrease Current Assets. Therefore, one result of paying dividends will be a decline in the Current Ratio.*

*Total Debt / Owners' Equity*

*Because the payment of cash dividends comes from Retained Earnings, and Retained Earnings is part of Owners' Equity, the payment of cash dividends will reduce Owners' Equity with no corresponding reduction in Liabilities. Thus the ratio, Total Debt / Owners' Equity, will increase.*

**page 241, #10.4:** The Wong Corporation achieved sales of \$5.3 million during 1995 and had an accounts receivable balance at the end of 1995 of \$2.1 million. If that accounts receivable balance grew by 20 percent during the course of the year, what was Wong Corporation's average accounts receivable collection period for 1995?

*Average Accounts Receivable Collection Period =  
Average Accounts Receivable / Average Sales per Day*

- *For Average Accounts Receivable:*

*Given end of 1995 value of \$2.1 million is 20% more than it was at the end of 1994, thus*

*1.2x = \$2.1 million, and so*

*end of 1994 value = x = \$1.75 million*

*Thus Average Accounts Receivable  
= (\$1.75 + 2.10) / 2 = \$1.925 million*

- *Average Sales per Day = \$5.3 million / 365*

- *Thus, Average Accounts Receivable Collection Period*

*= (\$1.925)(365) / \$5.3 = 132.57 ≈ 133 days*