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Using Accounting Information Exercises I

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Problem 1

Tile Masters produces two varieties of tile, outdoor and indoor. In recent years, the outdoor tile business unit has failed to meet management's goals. At the beginning of 20X9, Tile Masters sold the outdoor tile business, resulting in a $375,000 pretax gain.

The indoor tile product continues to be very successful. During 20X9, product sales were $10,500,000, at a gross margin of 30%. Selling expenses totaled $1,200,000 and administrative expenses totaled $1,800,000. Tile Masters is subject to a 40% income tax rate.

a) Prepare the 20X9 income statement assuming that management views the outdoor tile business as a separate and distinct line of business.
b) Prepare the 20X9 income statement assuming that the outdoor tile business is not a separate and distinct line of business.

Worksheet 1

a)

TILE MASTERS Income Statement For the Year Ending December 31, 20X9

b)

TILE MASTERS Income Statement For the Year Ending December 31, 20X9

Solution 1

a)

TILE MASTERS Income Statement For the Year Ending December 31, 20X9				
Sales			$	10,500,000
Cost of goods sold				7,350,000
Gross profit			$	3,150,000
Operating Expenses				
Selling	$	1,200,000		
Administrative		1,800,000		3,000,000
Income from continuing operations before income taxes			$	150,000
Income taxes				60,000
Income from continuing operations			$	90,000
Discontinued operations				
Gain on sale of swimming pool business	$	375,000		
Income tax on disposal of swimming pool business		150,000		
Gain on discontinued operations				225,000
Net income			$	315,000

b)

TILE MASTERS Income Statement For the Year Ending December 31, 20X9				
Sales			$	10,500,000
Cost of goods sold				7,350,000
Gross profit			$	3,150,000
Operating Expenses				
Selling	$	1,200,000		
Administrative		1,800,000		
Gain on sale of swimming pool business		(375,000)		2,625,000
Income from continuing operations before income taxes			$	525,000
Income taxes				210,000
Net income			$	315,000

Problem 2

Center Street Transit began 20X6 with 1,800,000 shares of common stock outstanding. On May 1, 20X6, Center Street Transit issued 800,000 additional shares of common stock. 150,000 shares of common stock were reacquired on August 1, 20X6. Center Street Transit reported net income of $4,500,000 for the year ending December 31, 20X6. Center Street Transit paid $500,000 in common dividends during 20X6.

a) Calculate the weighted-average common shares outstanding for 20X6.
b) Calculate basic earnings per share for 20X6.
c) If Center Street Transit also had preferred stock outstanding, and declared and paid $455,000 in dividends on these shares during 20X6, calculate the revised amount for basic earnings per share.

Worksheet 2

a)

Time Interval	Portion of Year	Shares Outstanding During Time Interval	Calculations	Weighted-Average Impact
	12 months			

b)

c)

Solution 2

a)

Time Interval	Portion of Year	Shares Outstanding During Time Interval	Calculations	Weighted-Average Impact
Jan. 1 through April 30	4 months	1,800,000	4/12 X 1,800,000 =	600,000
May 1 through July. 31	3 months	2,600,000 (1,800,000 + 800,000)	3/12 X 2,600,000 =	650,000
Aug. 1 through Dec. 31	5 months	2,450,000 (2,600,000 – 150,000)	3/12 X 2,450,000 =	1,020,833
	12 months			**2,270,833**

b)

Basic EPS

=

Income Available to Common

÷

Weighted-Average Number of Common Shares Outstanding

$1.98 = $4,500,000/2,270,833

c)

Basic EPS

=

Income Available to Common

÷

Weighted-Average Number of Common Shares Outstanding

$1.78 = ($4,500,000 – $455,000)/2,270,833

Problem 3

Dubai Corporation has a simple capital structure, and its equity section follows:

Stockholders' Equity		
Common stock, $0.50 par value, 1,500,000 shares authorized, 500,000 shares issued and outstanding	$	250,000
Paid-in capital in excess of par -- common stock		2,250,000
Retained earnings		4,000,000
Total stockholders' equity	$	6,500,000

Cairo Corporation has a complex capital structure, and its equity section follows:

Stockholders' Equity			
Capital stock:			
Preferred stock, $50 par value, callable at 102, 5%, cumulative, 250,000 shares authorized, 150,000 shares issued and outstanding	$ 7,500,000		
Common stock, $1 par value, 1,000,000 shares authorized, 400,000 shares issued and outstanding	400,000	$ 7,900,000	
Additional paid-in capital:			
Paid-in capital in excess of par -- preferred stock	$ 120,000		
Paid-in capital in excess of par -- common stock	1,600,000	1,720,000	
Total paid-in capital			$ 9,620,000
Retained earnings			6,910,000
Total stockholders' equity			$ 16,530,000

With the exception of the current year's preferred dividend which is now due, Cairo has paid all dividends on the preferred stock.

Determine the issue price of each company's common and preferred stock. Determine the book value per common share for each company.

Worksheet 3

Dubai Corporation:

Cairo Corporation:

Solution 3

Dubai Corporation:

Dubai's common stock was issued at $5 per share.
($250,000 par + $2,250,000 additional paid-in capital) ÷ 500,000 shares

Dubai's common stock has a book value per share of $13.
$6,500,000 total equity ÷ 500,000 shares

Cairo Corporation:

Cairo's common stock was issued at $5 per share.
($400,000 par + $1,600,000 additional paid-in capital) ÷ 400,000 shares

Cairo's preferred was issued at $50.80 per share.
($7,500,000 par + $120,000 additional paid-in capital) ÷ 150,000 shares

Cairo's common stock has a book value per share of $38.65:

Total Equity			$	16,530,000
Less: Amount of equity attributable to preferred				
Call price ($7,500,000 X 102%)	$	7,650,000		
Dividends claim (1 year @ $7,500,000 X 5%)		375,000		8,025,000
Residual equity for common shares			$	8,505,000
Number of common shares				400,000
Book value per common share ($8,505,000/400,000)			$	21.26

Problem 4

Calculate the return on assets and return on equity for the following companies. What appears to be the average interest rate faced by the companies? As a broad generalization, which companies appear to be effectively utilizing debt to improve financial performance?

	Net Income	Interest Expense*	Preferred Dividends	Average Assets	Average Equity
Price Corp.	$400,000	$35,000	$0	$3,850,000	$3,500,000
Clark Corp.	$300,000	$280,000	$70,000	$6,650,000	$3,850,000
Allred Corp.	$2,500,000	$700,000	$52,500	$14,000,000	$7,000,000
Nilson Corp.	$1,000,000	$700,000	$350,000	$21,000,000	$14,000,000

* Note: Many analysts use the "after tax" cost of interest (i.e., $1 of interest only costs $0.75 if a company faces a 25% tax rate) in calculating the return on assets. The idea is to determine how much higher income would be without the interest impact. For purposes of this problem you may simply use the interest expense shown.

Worksheet 4

	Return on Assets	Return on Equity
Price Corp.		
Clark Corp.		
Allred Corp.		
Nilson Corp.		

Discussion:

Solution 4

	Return on Assets*	Return on Equity**	
Price Corp.	11.30%	11.43%	-0.13%
Clark Corp.	8.72%	5.97%	2.75%
Allred Corp.	22.86%	34.96%	-12.11%
Nilson Corp.	8.10%	4.64%	3.45%

* Return on Assets Ratio = (Net Income + Interest Expense)/Average Assets
** Return on Equity Ratio = (Net Income – Preferred Dividends)/Average Common Equity

Discussion:

The interest rate appears to be 10%. Notice that interest expense is about 10% of the average debt. The average debt is estimated as the difference between the average assets and average equity.

Price and Allred each have a ROE > ROA. This suggests effective utilization of debt. Notice that these two companies also have an ROA > interest rate. The other two companies have an ROA < interest cost, and this is resulting (generally) in a lower ROE.

Problem 5

ZNN Technology is based in the USA and prepares its financial statements in dollars. The company uses a perpetual inventory system. On November 17, 20X6, Universal had two separate purchase transactions from suppliers in Europe.

The first transaction was for $200,000. Terms of sale provide for settlement in dollars. The account was paid in full on January 31, 20X7.

The second transaction was for 100,000€. Terms of sale provide for settlement in euros. The account was paid in full on January 31, 20X7.

The exchange rate of dollars for euros fluctuated as follows:

November 17, 20X6: $1.28 per euro
December 31, 20X6: $1.32 per euro
January 31, 20X7: $1.29 per euro

Prepare journal entries showing the inventory purchase, year-end adjustment (if necessary), and final settlement for each of these two transactions.

Worksheet 5

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**
17-Nov			
31-Jan			

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**
17-Nov			
31-Dec			
31-Jan			

Solution 5

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**
17-Nov	Inventory	200,000	
	Accounts Payable		200,000
	Purchased inventory on account		
31-Jan	Accounts Payable	200,000	
	Cash		200,000
	Paid accounts payable		

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**
17-Nov	Inventory	128,000	
	Accounts Payable		128,000
	Purchased inventory on account; 100,000€ X $1.28		
31-Dec	Currency Exchange Loss	4,000	
	Accounts Payable		4,000
	Adjusted payable based on exchange rate change; 100,000€ X $1.32 = $132,000 (vs. $128,000)		
31-Jan	Accounts Payable	132,000	
	Currency Exchange Gain		3,000
	Cash		129,000
	Paid accounts payable and recorded exchange gain; 100,000€ X $1.29 = $129,000 (vs. $132,000)		

Problem 6

MG Corporation was a diversified company with two separate lines of business – automobiles and financial services. At the beginning of 20X8, MG sold its financial services unit, resulting in a $1,500,000 pretax gain. The following additional transactions and events pertain to 20X8:

The automobile unit sold an assembly plant at pretax loss of $1,500,000. This asset sale did not represent the sale of a business unit.

General information for 20X8 is as follows: Sales, $15,000,000; Cost of Goods Sold, $6,400,000; Selling Expenses, $3,000,000; and General & Administrative Expenses, $2,500,000. The company's income tax rate is 30%.

The company incurred a $350,000 clean-up cost (pretax) associated with an accidental release of potentially hazardous chemicals. The company has very strong controls to prevent such events, and this occurred only because of a series of nonrecurring and unusual system failures. The loss is judged to be extraordinary.

MG changed its method of accounting for inventory at the beginning of 20X8. The cost of goods sold of $6,400,000 is based on the new method. Cumulatively, prior years' income would have been $4,800,000 higher (net of tax effects) had the new method been in use all along.

The company discovered an error in a prior year's report. The error resulted in a $840,000 overstatement of 20X7 net income.

a) Prepare the 20X8 income statement for MG Corporation.
b) Retained earnings at January 1, 20X8, was $11,000,000, before giving consideration to the correction of error or accounting change described above. What is the balance of the revised beginning retained earnings?
c) The company had $800,000 of other comprehensive income (net of any tax effects) related to holding gains on available for sale securities. How much is total "comprehensive income?

Worksheet 6

a)

		$ -
		-
		$ -
	$ -	
	-	
	-	-
		-
		-
		$ -
	$ -	
	-	
		-
	$ -	
	-	
		-
		$ -

b)

c)

Solution 6

a)

MG CORPORATION Income Statement For the Year Ending December 31, 20X8				
Sales			$	15,000,000
Cost of goods sold				6,400,000
Gross profit			$	8,600,000
Operating Expenses				
Selling	$	3,000,000		
General & administrative		2,500,000		
Loss on sale of paint factory		1,500,000		7,000,000
Income from continuing operations before income tax				1,600,000
Income tax on continuing operations				480,000
Income from continuing operations			$	1,120,000
Discontinued operations				
Gain on sale of financial services business	$	1,600,000		
Less: Income tax on sale of business		450,000		
Gain on discontinued operations, net of tax				1,050,000
Extraordinary item				
Clean up costs of hazardous waste accident	$	350,000		
Income tax benefit of clean up costs		105,000		
Extraordinary loss, net of tax				245,000
Net income			$	1,365,000

b) The beginning retained earnings would be revised to $14,960,000 ($11,000,000 + $4,800,000 accounting change – $840,000 error correction).

c) Total comprehensive income is $2,165,000 ($1,365,000 net income + $800,000 other comprehensive income).

Problem 7

Box Corporation has common and preferred stock outstanding at December 31, as follows:

> 2,000,000 shares of $1 par value common stock. The company started the year with 1,900,000 shares, issued 300,000 shares on May 1, and reacquired 200,000 shares on November 1.
>
> 200,000 shares of $100 par value, 5% preferred. These shares have been outstanding all year, and the $1,000,000 dividend was declared and paid during the year.

The company's net income for the full year was $1,529,000.

a) Compute the company's basic earnings per share.
b) Additionally, assume the preferred stock is convertible into 4,000,000 shares of common stock. Compute the company's diluted earnings per share. For this calculation, the numerator will be net income, as you will assume that the preferred dividend was not paid ("if" the preferred was converted to common, the preferred dividend would not have been paid). The denominator will be the weighted-average common shares plus the number of shares that would be issued on conversion (i.e., 4,000,000).

Worksheet 7

a)

Time Interval	Portion of Year	Shares Outstanding During Time Interval	Calculations	Weighted-Average Impact
Jan. 1 through April 30				
May 1 through Oct. 31				
Nov. 1 through Dec. 31				
	12 months			**0**

a)

b)

Solution 7

a)

Time Interval	Portion of Year	Shares Outstanding During Time Interval	Calculations	Weighted-Average Impact
Jan. 1 through April 30	4 months	1,900,000	4/12 X 1,900,000 =	633,333
May 1 through Oct. 31	6 months	2,200,000 (1,900,000 + 300,000)	6/12 X 2,200,000 =	1,100,000
Nov. 1 through Dec. 31	2 months	2,000,000 (2,200,000 – 200,000)	2/12 X 2,000,000 =	566,667
	12 months			**2,300,000**

a)

Basic EPS

=

Income Available to Common

÷

Weighted-Average Number of Common Shares Outstanding

$0.23 = ($1,529,000 – $1,000,000)/2,300,000

b)

Diluted EPS

=

Net Income

÷

Weighted-Average Number of Common Shares Outstanding +

Shares from Assumed Conversion of Preferred

$0.21 = $1,529,000/(2,300,000 + 4,000,000)