

TAKE HOME QUESTIONS

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Financial Management

Q1. BLACK INC.

	2018	2019
Revenue	\$4,000	\$4,100
Costs of goods sold	1,600	1,700
Depreciation	500	520
Inventories	300	350
Administrative expenses	500	550
Interest expense	150	150
Taxes	400	420
Accounts payable	300	350
Accounts receivable	400	450
Net fixed assets	5,000	5,800
Long-term debt	2,000	2,400
Notes payable	1,000	600
Dividends paid	410	410
Cash and marketable securities	800	300

Q1

- ◉ Construct a balance sheet for Black Inc, for 2018 and 2019. What is shareholder's equity?
- ◉ Construct an income statement for Black Inc, for 2018 and 2019
- ◉ Suppose that Black Inc, has 500.000 shares outstanding. What were Earnings per Share (EPS)?

Q2. MINICASE

- Ms. Brown, a self-employed Certified Public Accountant (CPA), completed her first full year in business. During the year, *she billed \$360,000 for her accounting services* on December 31, 2019.
- She had two employees, a bookkeeper and a clerical assistant. In addition to *her monthly salary of \$8,000*, Ms. Brown paid *annual salaries of \$48,000 and \$36,000 to the bookkeeper and the clerical assistant*, respectively.
- Employment taxes and benefit costs for Ms. Brown and *her employees totalled \$34,600* for the year. *Expenses for office supplies, including postage, totalled \$10,400* for the year.
- In addition, Ms. Brown *spent \$17,000 during the year on tax-deductible travel* and entertainment associated with client visits and new business development. *Lease payments for the office space rented (a tax-deductible expense) were \$2,700 per month. Depreciation expense on the office furniture and fixtures was \$15,600 for the year.* During the year, Ms. Brown paid *interest of \$15,000 on the \$120,000 borrowed* to start the business. She paid an *average tax rate of 30%* during 2012.
- Prepare an income statement for Ms. Brown, for the year ended December 31, 2019.*

Q3. MINICASE

- ◉ The Balance Sheets for December 31, 2015 and 2014 and the Income Statement for the year ended December 31, 2015, For Technica Inc, are given. **Discuss the formal and informational content of each of these statements.**
- ◉ Prepare the Common-Size BS and IS and find the operating and net profit margin of this firm.

Assets	2015	2014	Common Size BS	
Cash	15.000	16.000	3,67	3,99
Marketable Securities	7.200	8.000	1,76	1,99
Accounts Receivable	34.100	42.200	8,35	10,52
Inventories	82.000	50.000	20,08	12,46
Total current assets	138.300	116.200	33,87	28,96
Land and buildings	150.000	150.000	36,74	37,39
Machinery and equipment	200.000	190.000	48,98	47,36
Furniture and fixtures	54.000	50.000	13,23	12,46
Other	11.000	10.000	2,69	2,49
Total gross fixed assets	415.000	400.000	-	-
Less. Accumulated depreciation	145.000	115.000	35,51	28,66
Net fixed assets	270.000	285.000	66,13	71,04
Total assets	408.300	401.200	100,00	100,00
Liabilities and Stockholder's Equity				
Accounts payable	57.000	49.000	13,96	12,21
Notes payable	13.000	16.000	3,18	3,99
Accruals	5.000	6.000	1,22	1,50
Total current liabilities	75.000	71.000	18,37	17,70
Long term debt	150.000	160.000	36,74	39,88
Common stock equity (shares outstanding: 19,500 in 2015 and 20,000 in 2014)	110.200	120.000	26,99	29,91
Retained earnings	73.100	50.200	17,90	12,51
Total stockholder's equity	183.300	170.200	44,89	42,42
Total liabilities and stockholder's equity	408.300	401.200	100,00	100,00

Q4. RATIO ANALYSIS

Complete the 2015 balance sheet for Brown Industries using the information that follows it.

Brown Industries Balance Sheet December 31, 2015

Assets		Liabilities and Stockholders' Equity	
Cash	\$32,720	Accounts payable	\$120,000
Marketable securities	25,000	Notes payable	_____
Accounts receivable	_____	Accruals	<u>20,000</u>
Inventories	_____	Total current liabilities	_____
Total current assets	_____	Long-term debt	_____
Net fixed assets	_____	Stockholders' equity	<u>\$600,000</u>
Total assets	<u>\$</u> _____	Total liabilities and stockholders' equity	<u>\$</u> _____

The following financial data for 2015 are also available:

1. Sales totaled \$1,800,000.
2. The gross profit margin was 25%.
3. Inventory turnover was 6.0.
4. The average collection period was 40 days.
6. The current ratio was 1.60.
7. The total asset turnover ratio was 1.20.
8. The debt ratio was 60%.

Q5. COMPREHENSIVE RATIO ANALYSIS

Given the following financial statements, historical ratios, and industry averages, calculate Sterling

- Company's financial ratios for the most recent year. (Assume a 365-day year.)
- Analyze its overall financial situation from both a cross-sectional and a time-series viewpoint.
- Break your analysis into evaluations of the firm's **liquidity, activity, debt, profitability, and market**

Sterling Company Income Statement for the Year Ended December 31, 2012

Sales revenue	\$10,000,000
Less: Cost of goods sold	<u>7,500,000</u>
Gross profits	<u>\$ 2,500,000</u>
Less: Operating expenses	
Selling expense	\$300,000
General and administrative expenses	650,000
Lease expense	50,000
Depreciation expense	<u>200,000</u>
Total operating expense	<u>\$ 1,200,000</u>
Operating profits	<u>\$ 1,300,000</u>
Less: Interest expense	<u>200,000</u>
Net profits before taxes	<u>\$ 1,100,000</u>
Less: Taxes (rate = 40%)	<u>440,000</u>
Net profits after taxes	<u>\$ 660,000</u>
Less: Preferred stock dividends	<u>50,000</u>
Earnings available for common stockholders	<u><u>\$ 610,000</u></u>
Earnings per share (EPS)	\$3.05

Sterling Company Balance Sheet December 31, 2012

Assets		Liabilities and Stockholders' Equity	
Cash	\$ 200,000	Accounts payable ^b	\$ 900,000
Marketable securities	50,000	Notes payable	200,000
Accounts receivable	800,000	Accruals	<u>100,000</u>
Inventories	<u>950,000</u>	Total current liabilities	<u>\$ 1,200,000</u>
Total current assets	<u>\$ 2,000,000</u>	Long-term debt (includes financial leases) ^c	<u>\$ 3,000,000</u>
Gross fixed assets (at cost) ^a	\$12,000,000	Preferred stock (25,000 shares, \$2 dividend)	\$ 1,000,000
Less: Accumulated depreciation	<u>3,000,000</u>	Common stock (200,000 shares at \$3 par) ^d	600,000
Net fixed assets	\$ 9,000,000	Paid-in capital in excess of par value	5,200,000
Other assets	<u>1,000,000</u>	Retained earnings	<u>1,000,000</u>
Total assets	<u><u>\$12,000,000</u></u>	Total stockholders' equity	<u>\$ 7,800,000</u>
		Total liabilities and stockholders' equity	<u><u>\$12,000,000</u></u>

^aThe firm has an 8-year financial lease requiring annual beginning-of-year payments of \$50,000. Five years of the lease have yet to run.

^bAnnual credit purchases of \$6,200,000 were made during the year.

^cThe annual principal payment on the long-term debt is \$100,000.

^dOn December 31, 2012, the firm's common stock closed at \$39.50 per share.

Historical and Industry Average Ratios for Sterling Company

Ratio	Actual 2010	Actual 2011	Industry average, 2012
Current ratio	1.40	1.55	1.85
Quick ratio	1.00	0.92	1.05
Inventory turnover	9.52	9.21	8.60
Average collection period	45.6 days	36.9 days	35.5 days
Average payment period	59.3 days	61.6 days	46.4 days
Total asset turnover	0.74	0.80	0.74
Debt ratio	0.20	0.20	0.30
Times interest earned ratio	8.2	7.3	8.0
Fixed-payment coverage ratio	4.5	4.2	4.2
Gross profit margin	0.30	0.27	0.25
Operating profit margin	0.12	0.12	0.10
Net profit margin	0.062	0.062	0.053
Return on total assets (ROA)	0.045	0.050	0.040
Return on common equity (ROE)	0.061	0.067	0.066
Earnings per share (EPS)	\$1.75	\$2.20	\$1.50
Price/earnings (P/E) ratio	12.0	10.5	11.2
Market/book (M/B) ratio	1.20	1.05	1.10

Q6.DU PONT SYSTEM OF ANALYSIS

Use the following ratio information for Johnson Corp. and the industry averages for Johnson's line of business to:

- Construct the DuPont system of analysis for both Johnson and the industry.
- Evaluate Johnson (and the industry) over the 3-year period.
- Indicate in which areas Johnson requires further analysis. Why?

Johnson	2010	2011	2012
Financial leverage multiplier	1.75	1.75	1.85
Net profit margin	0.059	0.058	0.049
Total asset turnover	2.11	2.18	2.34
Industry Averages			
Financial leverage multiplier	1.67	1.69	1.64
Net profit margin	0.054	0.047	0.041
Total asset turnover	2.05	2.13	2.15

