FI 3300 - CORPORATION FINANCE
Take-Home Problem Set Two (THPS-2)
Fall 2020

Directions: This problem set covers chapters 1, 3 and 4 in the textbook. Determine or compute an answer for each question/problem. After you have computed an answer for every question, enter your answers online via the "quiz" function entitled "**THPS-2 ANSWER SUBMISSION FORM**." See the course calendar for when the answer submission form will open and close. I will post a detailed solution key to the problem set right after the Answer Submission Form closes. See the course calendar for the day(s) on which I will answer questions about these problems in the chat room.

This is a take-home, open book, open notes financial statement analysis problem set. **Work on this Assignment is to be yours alone - any discussion of either the questions on the assignment or your answers with anyone other than your instructor will be considered as cheating and, thus, as a violation of the GSU honor code.**

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1. The primary goal of the management of a publicly traded corporation should be to ______________.
   a. create jobs
   b. promote social good
   c. maximize profits
   d. minimize risk
   e. maximize shareholder wealth

2. In conducting a common-size analysis, every income statement item is divided by __________ and every balance sheet account is divided by __________.
   a. net sales or revenues; total assets.
   b. total assets; total liabilities and equity.
   c. total assets; net sales or revenues.
   d. its corresponding base year balance sheet item; its corresponding base year income statement item.
   e. its corresponding base year income statement item; its corresponding base year balance sheet item.

3. __________ is an accounting statement that lists a company's assets, liabilities and equity. The statement is a stock measure that displays these account values at a specific point in time.
   a. The income statement
   b. The statement of cash flows
   c. The sources and uses statement
   d. The balance sheet
   e. None of the above

4. According to the textbook, finance is divided into three separate subject areas. Two of the subject areas of finance are Corporate Financial Management and Financial Markets and Institutions. The third subject area of finance is:
   a. International Trade
   b. Banking
   c. Accounting
   d. Investments
   e. None of the above

5. Which of the following are items/accounts that typically appear on a balance sheet?

   a. cash, cost of goods sold, inventories
   b. accounts receivable, retained earnings, operating expenses
   c. net sales, depreciation expense, advertising expense
   d. cash, depreciation expense, taxes
   e. net fixed assets, inventories, notes payable

6. Which of the following would directly affect (either increase or decrease) net cash flow from **operating activities** (assuming all else remains constant)? Note: there more be more than one answer for this questions – record the letter of all that apply (this is an all or nothing answer).

   a. An increase in dividends paid.
   b. A decrease in accounts receivable.
   c. A decrease in notes payable (i.e., bank loans).
   d. An increase in inventory.
   e. An increase in accounts payable.
   f. An increase in retained earnings.
   g. A decrease in cash.
   h. A decrease in gross plant and equipment.
   i. An increase in accruals.

7. If a firm's net sales (i.e., revenue) increases, but total assets, its debt ratio, and its net profit margin and remain the same as they were before net sales increased, the firm's:

   a. ROE would not change.
   b. ROE could either increase or decrease depending on the interaction between the equity multiplier and the days payable ratio.
   c. ROE would increase.
   d. ROE would decrease.
   e. There is insufficient information to determine the effect on ROE.

8. Which of the following steps is most likely to **decrease** a company's cash conversion cycle (assume that none of the following actions has any impact on sales or COGS)? Note: there more be more than one answer for this questions – record the letter of all that apply (this is an all or nothing answer).

   a. Change its receivables policy from net 45 to net 35 (note that this action will decrease the firm's average collection period from 45 days to 35 days).
   b. Change its payables policy to pay bills in 30 days instead of in 40 days.
   c. Decrease the inventory conversion period from 50 days to 40 days.
   d. Reduce the firm's notes payable (i.e., bank loan) balance by 20%.
   e. None of the actions listed above will decrease the firm's cash conversion cycle.

9. Which of the following actions would decrease the current ratio (assuming an initial current ratio of 0.8, and current liabilities equal to $1,000,000)?

   a. Borrow $100,000 in short term debt and deposit this money (i.e., $100,000) into the firm's cash account.
   b. Borrow $200,000 in long-term debt to buy $200,000 worth of additional inventory.
   c. Borrow $50,000 of short-term debt and use the proceeds to pay all operating expenses sooner, thus lowering accruals (i.e., accrued expenses) by $50,000.
   d. Sell $250,000 of fixed assets to pay off an equal amount of long-term debt.
   e. None of the above – that is, none of the actions listed about will decrease the current ratio.

10. RedCap Manufacturing, Inc. is planning to borrow money by taking out a short term loan (i.e., increase notes payable) and depositing this money directly into the firm's checking account (i.e., increase cash). RedCap believes that this event will have no affect on either sales or costs, and therefore no affect on net income.

    All else constant, this new policy should cause the firm's **<u>quick ratio</u>** (assuming an initial quick ratio of 1.5) to:

    a. Decrease
    b. Increase
    c. No Change
    d. Not enough information is provided to answer this question.

11. BlueHat, Inc. is planning to use excess cash that the company has in its checking account (i.e., reduce cash) to pay off a long term loan balance. (i.e., decrease long-term debt). BlueHat believes that this event will have no affect on either sales or costs, and therefore no affect on net income.

    All else constant, this new policy should cause the firm's **<u>debt ratio</u>** (assuming an initial debt ratio of 45%) to:

    a. Decrease
    b. Increase
    c. No Change
    d. Not enough information is provided to answer this question.

12. GreenChapeau, Inc. is planning to increase its short-term loans (i.e., increase notes payable) to pay for an increase in the firm's basic inventory level (i.e., increase inventory). GreenChapeau believes that this event will have no affect on either sales or costs, and therefore no affect on net income.

    All else constant, this new policy should cause the firm's **<u>current ratio</u>** (assuming a current ratio of 0.75) to:

    a. Decrease
    b. Increase
    c. No Change
    d. Not enough information is provided to answer this question.

All of the following questions are open-ended problems. You must compute an answer for every problem. For percentage answers, calculate your answer as a percent rounded to 2 decimal places. For example, you would record ROA = .1263974 as 12.64% (note that on D2L you will enter 12.64 without the percent sign). For dollar answers, round to the nearest dollar. For example, you would record $12,345.83943 as $12,346 (note that on D2L you will enter 12346 without a comma and without the dollar sign).

13. LavishNest, Inc. has an ROA (return on assets) of 12 percent, total assets of $400,000 and a net profit margin of 4.5 percent. What are LavishNest's annual sales?

14. ProlificPath's debt-to-total assets ratio is 0.544 (i.e., debt ratio = 54.4%). What is the company's debt-to-equity ratio? (Enter answer as a ratio rounded to 2 decimal places – that is, do not convert to a percent; for example, enter 80/35 = 2.2857 as 2.29).

15. Vailar, Inc has a debt ratio of 22.5% and ROE = 15%. What is Vailar's ROA? (Enter answer as a percent).

16. Gormique, Inc. has an ROA of 18% and a debt/equity ratio of 0.55. The firm's ROE is _________. (Enter answer as a percent).

17. Assume that RizeForce, Inc. has:

- Debt ratio = 70%
- Net profit margin = 15%
- Return on assets (ROA) = 7.5%

Find RizeForce's Total Asset Turnover ratio. (Enter answer as a ratio – that is, do not convert to a percent).

18. Assume that SharpTactic, Inc. has ROA of 20.5%, ROE of 42% and Total Asset Turnover ratio of 3.5. Calculate the debt ratio for SharpTactic. (Enter answer as a percent).

USE THE DATA IN THE TABLE BELOW TO ANSWER QUESTIONS 19 – 24
(Assume all account figures are in dollars)

	2018	2019
Accounts payable	710	660
Accounts receivable, net	2,450	2,620
Accruals	70	140
Cash	???	???
Capital surplus	1,260	1,620
Common stock	990	1,120
Cost of goods sold	7,190	7,630
Depreciation expense	1,610	1,730
Interest expense	240	210
Inventory (end of year)	5,110	4,960
Long-term debt	6,320	6,130
Net fixed assets	9,390	9,860
Net sales	12,830	13,950
Notes payable	800	730
Operating expenses (excluding depreciation)	2,310	2,530
Retained earnings	8,210	8,430
Taxes	350	460

19. This company's cash balance on the 2018 balance sheet was ________.

20. The total asset turnover ratio for this company in 2019 = _______.

21. ROE for 2019 is _____%.

22. Cash flow from operating activities in 2019 is $ _______.

23. Cash flow from investing activities in 2019 is $ _________.

24. Cash flow from financing activities in 2019 is $ _________.

USE THE INFORMATION BELOW TO ANSWER THE FOLLOWING 3 QUESTIONS

Proxelo, Inc.		
Balance Sheets		
For the Years Ending December 31,		
	2018	**2019**
Cash	1,500	1,560
Accounts receivable	3,740	4,110
Inventory	10,120	8,760
Current Assets	15,360	14,430
Gross fixed assets	56,100	64,570
(Accumulated depreciation)	(9,590)	(12,150)
Net fixed assets	46,510	52,420
Land	1,500	10,000
Total Assets	63,370	76,850
Notes payable	1,000	900
Accounts payable	2,260	4,030
Accruals	1,570	1,710
Current portion of long-term debt	470	880
Current Liabilities	5,300	7,520
Long-term debt	37,750	36,850
Common stock (par value = $0.25)	1,000	2,500
Additional paid in capital	4,800	10,660
Retained earnings	14,520	19,320
Total Liabilities & Equity	63,370	76,850
Additional Data from 2019 Income Statement:		
Sales in 2019		387,620
Net income in 2019		27,960

25. Calculate the Cash flows from operating activities for 2019.
26. Calculate the Cash flows from investing activities for 2019.
27. Calculate the Cash flows from financing activities for 2019.

USE THE FOLLOWING INFORMATION TO CONSTRUCT A BALANCE SHEET TO ANSWER QUESTIONS 28 through 30

Sales	$ 2,000,000
Gross profit margin	20%
Inventory turnover ratio (Cost of goods sold/Inventory)	25
Net profit margin	4%
Average collection period	45
Return on equity	25%
Accumulated depreciation	$ 75,000
Return on assets	12.5%
Accounts payable days	18
Notes payable	$ 18,000
Gross fixed assets	$ 400,000
Percent of sales on credit (remainder are cash sales)	80%
NOTE: Assume a 360 day year for all ratios, etc.	

Assume that the only accounts on the balance sheet are those listed below. Fill in this chart with the data provided and then answer questions 28, 29 and 30.

Cash	____________	Notes payable	____________
Accounts receivable	____________	Accounts payable	____________
Inventory	____________	Long-term debt	____________
Gross fixed assets	____________	Equity	____________
(Accumulated depreciation)	____________	Total liab & equity	____________
Net fixed assets	____________		
Total assets	____________		

28. Cash = ____________.

29. Long-term debt = ____________.

30. Total assets =____________.

USE THE FOLLOWING INFORMATION TO FILL IN THE BALANCE SHEET BELOW TO ANSWER QUESTIONS 31 through 34

Number of shares outstanding	15,000	Average collection period (days)	60
Sales	$200,000	Accounts payable days	90
Gross profit margin	20%	Retained earnings (2018)	$23,700
Inventory turnover ratio	4	Dividend payout ratio	80%
Notes payable	$10,000	Accruals	$5,000
Net profit margin	15%	Current ratio	1.5
Return on assets	7.5%	Debt ratio	40%

Note: Of total sales, 60 percent are on credit and the remainder are cash sales. Assume a 360-day year. All data in the table above, unless otherwise stated, is for the year 2019.

Hodun, Inc.
Balance Sheet for the Year Ending December 31, 2019

Cash	___________	Notes payable	___________
Accounts receivable	___________	Accounts payable	___________
Inventory	___________	Accruals	___________
Net fixed assets	___________	Long-term debt	___________
Total assets	___________	Common stock ($2 par value)	___________
		Capital surplus	___________
		Retained earnings	___________
		Total liab. & equity	___________

31. Cash = _____________.

32. Long-term debt = _____________.

33. Total assets =_____________.

34. Capital surplus = ___________.

USE THE FOLLOWING DATA TO ANSWER QUESTIONS 35 – 40

Annual Income Statements		
	2018	2019
Sales	524,600	562,000
COGS	????	149,600
Gross profit	381,000	412,400
Oper. exp	234,200	251,100
Depreciation	15,000	16,610
Operating profit	131,800	144,690
Interest exp.	9,500	10,600
EBT	122,300	134,090
Taxes	34,910	42,880
Net Income	87,390	91,210
Annual Balance Sheets		
	2018	2019
Cash	440,200	475,800
Accounts receivable	278,400	248,900
Inventories	293,500	317,500
Current Assets	1,012,100	1,042,200
Net fixed assets	1,125,000	???
Land	100,200	126,000
Total Assets	2,237,300	2,357,400
Notes payable	250,000	178,000
Accounts payable	110,200	118,500
Accruals	12,900	16,100
Current portion of long-term debt	100,200	195,100
Current Liabilities	473,300	507,700
Long-term debt	1,000,000	900,000
Common stock @ ($0.25 par)	25,000	28,900
Additional paid in capital	500,000	612,100
Retained earnings	239,000	308,700
Total Liabilities & Equity	2,237,300	2,357,400

35. Net fixed assets in 2019 were $__________.

36. COGS in 2018 was $__________.

37. The debt ratio for 2019 was ____%.

38. Cash flow from operating activities in 2019 was $________.

39. Cash flow from investing activities in 2019 was $__________.

40. Cash flow from financing activities in 2019 was $__________.