South Tuen Mun Government Secondary School
Business, Accounting and Financial Studies
Quiz Financial Analysis & Ratio

Name: _____ **Class:** _____ **( )**

1 What are the two major sources of funding for a firm? Why is it important for a firm to determine an optimal mix between these sources? (4 marks)

2a) What is financial leverage? How can we measure the financial leverage of a firm? (2 marks)

(b) What may happen if a firm has very high leverage? (3marks)

3) Explain why dividends may serve as a signal to investors about a firm's future profitability. (4 marks)

4) Forever Company has net working capital of $40,000, fixed assets of $2,400,000, sales of $6,000,000, and current liabilities of $800,000. How much in sales are generated from every $1 of its total assets? (4 marks)

5) The return on equity and the debt ratio of two property developers are shown below:

Developer	Return on Equity	Debt Ratio
A	11.3%	28.8%
B	14.4%	50.4%

If you are a risk adverse investor，which company’ s stock would you invest in? Explain. (4 marks)

6) Suggest FOUR ways for a firm to reduce bad debts, (4 marks)

7) How should a firm decide whether to take a cash discount? Explain (4 marks)

8) The financial statements of DSS Transportation Ltd are shown below:

DSS Transportation Ltd

Income statement for the year ended 31 December 2018

	$ 000
Sales	8,450
Less *Cost of goods sold*	(6,240)
Gross profit	2,210
Less *Operating expenses*	(1,400)
Operating profit	810
Less *Interest expenses*	(70)
Profit before tax	740
Less *Taxation*	(259)
Profit after tax	481

DSS Transportation Ltd

Balance sheets as at 31 December 2017 and 2018

	2017	2018
	$ 000	$ 000
ASSETS		
Non-current assets	3,150	3,600
Current assets		
Inventory	1,480	1,520
Accounts receivable	930	780
Cash	120	140
	2,530	2,440
Total assets	5,680	6,040
EQUITY AND LIABILITIES		
Capital and reserves		
Share capital (100,000 shares issued at $10 par value)	1,000	1,000
Share premium	2,200	2,000
Retained profits	530	710
Total equity	3,730	3,710
Non-current liabilities		
Long-term debt	840	1,210
Current liabilities		
Accounts payable	1,110	1,120
Total liabilities	1,950	2,330
Total equity and liabilities	5,680	6,040

(8a) Calculate (to two decimal places) the following accounting ratios for 2018

(i)Gross profit ratio	(ii)Net profit ratio
(iii)Current ratio	(iv)Quick ratio
(v)Debt ratio	(vi)Debt-to-equity ratio
(vii)Inventory turnover	(viii)Asset turnover

8b) Based on your answer in a), briefly comment on DSS's performance in 2017 and 2018 in terms of liquidity and solvency.

1) The major sources of funds for a firm are:

- issuing equity (i.e., equity financing) (1 mark)
- borrowing (i.e., debt financing) (1 mark)

It is important for a firm to determine an optimal mix between equity and debt because both financing methods involve costs. Choosing an optimal mix can reduce the overall cost of capital and allow the firm to engage in more projects which have a positive NPV. (2 marks)

2) (a) Financial leverage refers to the extent to which a firm is financed by debt rather than equity. (1 mark)
It can be measured by the debt ratio or debt-to-equity ratio. (1 mark)

(b) High financial leverage means that the firm relies heavily on debt financing. (1 mark)
As the firm's interest expenses are high, its risk of being unable to repay its debts is also high. (1 mark)

If the firm fails to repay its debts when due, it may be forced to go into liquidation. (1 mark)

3) If a firm distributes more of its net profits to stockholders as dividends, less cash will be retained for reinvestment. (2 marks)
As a result, the firm may have to give up profitable investment opportunities in the future. This will affect the firm's future profitability. (2 marks)

Therefore，dividends may be a signal to investors about a firm's future profitability.

4) To find the dollar amount of sales generated from every $1 of total assets, we have to calculate the asset turnover of Forever Company. (1 mark)

$$\text{Asset turnover} = \frac{\text{Sales}}{\text{Total assets}}$$

$$= \frac{\$6,000,000}{(\$2,400,000 + \$40,000 + \$800,000)} \quad \text{(2 marks)}$$

$$= 1.85 \text{ times} \quad (0.5)$$

Therefore, every $1 of total assets of Forever Company can generate $1.85 of sales. (0.5)

** Net working capital is defined as current assets minus current liabilities. Therefore, by adding current liabilities to net working capital, we can find the value of current assets.

5) I will invest in Developer A's stock. (1 mark)
Although Developer B has a higher return on equity, its debt ratio is also higher. (1 mark)

As a firm needs to pay interest and repay its loan principal whether it makes a profit or not, Developer B has a higher risk of being unable to repay its debts and being forced into liquidation. Investing in Developer B's stock is thus riskier. (2 marks)

Therefore, as a risk adverse investor, I would choose Developer A's stock instead.

6) When deciding whether to take a cash discount, it should consider both the interest rate of borrowing from banks and the cash discount:

If the borrowing rate is higher than the annual rate on the cash discount, the firm should not take the cash discount. (2 marks)

If the borrowing rate is lower than the annual rate on the cash discount, the firm should take the cash(2 marks)

7) A firm can reduce bad debts in the following ways:
- Raise credit standards
- Increase cash discount
- Shorten credit period
- Send friendly reminders to customers by emails or letters
- Employ a collection agency to collect accounts receivable on behalf of the firm

(Any four of the above, 1 mark for each point)

8) (a) (i) Gross profit ratio = $2,210,000 / $8,450,000 = 26.15% (1 mark)
(ii)Net profit ratio = $481,000 / $8,450,000 = 5.69%(1mark)
(iii)Current ratio = $2,440,000 /$1,120,000 = 2.18 times(1mark)
(iv)Quick ratio = ($2,440,000 - $ 1，520,000) / $ 1,120,000 = 0.82times(1mark)
(v)Debt ratio = $2,330,000 / $6,040,000 = 38.58%(1mark)
(vi)Debt-to-equity ratio = $1,210,000 /$3,710,000 = 0.33 times(1mark)
(vii)Inventory turnover = $6,240,000 /[($ 1,480,000 + $ 1,520,000)/2] = 4.16 times(1mark)
(viii)Asset turnover = $8,450,000 / $6,040,000 = 1.40 times(1mark)
(b) Liquidity:
Current ratio in 2010 = $2,530,000 / $1,110,000 = 2.28 times(1 mark)
Quick ratio in 2010 = ($2,530,000 - $1,480,000)/$1,110,000 = 0.95 times(1 mark)
Both the current ratio and quick ratio fell between 2010 and 2011. This indicates that the liquidity of DSS decreased in 2011 •(2marks)

Solvency:

Debt ratio in 2017 = $1,950,000 / $5,680,000 = 34.33% (1 mark)

Debt-to-equity ratio in 2017 = $840,000/$3,730,000 = 0.23 times (1 mark)

Both the debt ratio and debt-to-equity ratio increased between 2017 and 2018. This indicates that DSS relied more on debt financing. Therefore, the solvency of DSS decreased in 2018.(2marks)

(c) DSS's return on equity in 2018 = $481,000 /$3,710,000= 12.96%(1mark)

DSS's earnings per share in 2018 = $481,000/ 100,00() = $4.81(1 mark)

As both the return on equity and earnings per share of DSS are higher than those of NTR, the return from investing in DSS's stocks would be higher than that of NTR.(2marks)

Therefore, I would choose DSS's stocks.(1mark)