

FINANCIAL STATEMENT ANALYSIS

Lecture 4

FINANCIAL RATIO ANALYSIS

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Introduction

Financial ratio analysis involves calculating ratios for actual and hypothetical companies and evaluating the calculated ratios against the company prior ratios, ratios of successful companies, targeted ratios or the average industry performance. Below are such questions on financial ratio analysis.

Example one

The financial statements below were extracted from the books of E. A. Company Ltd. The excerpts below were also extracted from the key managers' reports;

The business environment in the year continued to present challenges such as competition, high energy costs and importation of cheap cement into the market which reduced sales in the local and regional markets.

The Group's performance in the year was affected by these factors resulting to a loss of \$ 385 million. Earnings per share reduced to a loss of \$ (4.30) from \$ 19.73 in the year 2013. Clinker production increased in the year reducing the quantity of purchased clinker by 39%.

Major improvements in production efficiencies however resulted in 3% savings in cost of production. However, the cost of energy increased marginally in the year averaging \$13.36 per kwh compared to \$ 12.70 per kwh in 2013. Power consumption averaged 69.1 million kwh in the current year compared to 67.7 million kwh in the previous year resulting in additional costs of \$. 70 million during the year in focus due to the higher production of clinker. As a result of the cost savings, Gross Margin returned an impressive 26% despite a 3% slump in cement prices.

Administrative and Selling Costs increased by \$ 700m (or 34%) attributed to higher staff and administration expenses incurred in the year. There was an increase in staff costs driven by restructuring management levels and staff compensation.

For the year under review, the Company returned an operating loss of \$92 million compared to prior year operating profit of \$340 million while the loss before tax was \$374 million compared to a profit before tax of \$1,419 million the previous year.

The previous year's results included Fair Value Gain on revaluation of the investment property amounting to \$730 million. Cash flows generated from operations remained relatively stable at above \$ 700 million similar to the previous year. Investments in long term capital projects used up \$597 million while servicing of loan obligations used up another \$541 million during the year

**CONSOLIDATED AND Company STATEMENTS OF PROFIT OR LOSS AND OTHER
COMPREHENSIVE INCOME
FOR THE YEAR ENDED 30 JUNE**

	GROUP		Company	
	2020	2019	2020	2019
	\$'000	\$'000	\$'000	\$'000
REVENUE	9,057,292	9,211,462	8,914,256	8,958,001
COST OF SALES	<u>(6,661,720)</u>	<u>(6,878,139)</u>	<u>(6,556,963)</u>	<u>(6,685,295)</u>
GROSS PROFIT	<u>2,395,572</u>	<u>2,333,323</u>	<u>2,357,293</u>	<u>2,272,706</u>
Other operating income	267,792	36,388	257,043	36,388
Provisions written back	<u>32,237</u>	<u>56,988</u>	<u>32,237</u>	<u>56,891</u>
	<u>2,695,601</u>	<u>2,426,699</u>	<u>2,646,573</u>	<u>2,365,985</u>
EXPENSES				
Selling and distribution	(511,731)	(422,251)	(481,469)	(418,435)
Administration and establishment	(1,935,930)	(1,450,158)	(1,902,833)	(1,426,499)
Other operating expenses	<u>(340,895)</u>	<u>(213,359)</u>	<u>(322,180)</u>	<u>(206,505)</u>
	<u>(2,788,556)</u>	<u>(2,085,768)</u>	<u>(2,706,482)</u>	<u>(2,051,439)</u>
(LOSS)/PROFIT FROM OPERATIONS	(92,955)	340,931	(59,909)	314,546
FINANCE INCOME	1,427	66,000	700	60,886
FINANCE COSTS	(318,941)	(311,612)	(318,941)	(311,612)
EXCHANGE GAIN ON FOREIGN CURRENCY LOAN	36,769	594,113	36,769	594,113
FAIR VALUE GAIN ON INVESTMENT PROPERTY	-	<u>730,046</u>	-	<u>730,046</u>
(LOSS)/PROFIT BEFORE TAXATION	(373,700)	1,419,478	(341,381)	1,387,979
TAXATION (CHARGE)/CREDIT	<u>(12,931)</u>	<u>355,905</u>	<u>(11,868)</u>	<u>355,905</u>
(LOSS)/PROFIT FOR THE YEAR	<u>(386,631)</u>	<u>1,775,383</u>	<u>(353,249)</u>	<u>1,743,884</u>
OTHER COMPREHENSIVE INCOME				
<i>Items that will not be reclassified subsequently to profit or loss:</i>				
Revaluation surplus	-	976,780	-	976,780
Deferred income tax on revaluation surplus	-	(264,837)	-	(264,837)
<i>Items that may be reclassified subsequently to profit or loss:</i>				
Exchange differences on translation of foreign operation	<u>1,049</u>	<u>1,508</u>	-	-
TOTAL OTHER COMPREHENSIVE INCOME	<u>1,049</u>	<u>713,451</u>	-	<u>711,943</u>
TOTAL COMPREHENSIVE (LOSS)/ INCOME FOR THE YEAR	<u>(385,582)</u>	<u>2,488,834</u>	<u>(353,249)</u>	<u>2,455,827</u>
(LOSS)/EARNINGS PER SHARE				

- Basic and diluted (\$) (4.30) 19.73 (3.93) 19.38

**CONSOLIDATED AND Company STATEMENTS OF FINANCIAL POSITION
AS AT 30 JUNE**

	GROUP		Company	
	2020	2019	2020	2019
	\$'000	\$'000	\$'000	\$'000
ASSETS				
NON-CURRENT ASSETS				
Property, plant and equipment	7,591,940	8,015,560	7,591,835	8,015,379
Capital work- in- progress	701,740	133,752	701,740	133,752
Intangible assets	-	39,977	-	39,977
Prepaid operating leases	9,498	11,497	9,498	11,497
Investment properties	2,225,046	2,225,046	2,225,046	2,225,046
Investment in subsidiary	-	-	2,500	2,500
Loan swap asset	1,834,377	2,044,066	1,834,377	2,044,066
Restricted deposits	<u>30,595</u>	<u>61,742</u>	<u>30,595</u>	<u>61,742</u>
	<u>12,393,196</u>	<u>12,531,640</u>	<u>12,395,591</u>	<u>12,533,959</u>
CURRENT ASSETS				
Inventories	2,199,517	2,191,123	2,192,859	2,172,290
Trade and other receivables	845,223	883,028	621,052	641,736
Amount due from related parties	474	6,030	333,083	398,077
Taxation recoverable	116,188	119,262	117,251	119,262
Short term deposits	31,366	29,558	31,366	29,558
Bank balances and cash	131,293	373,062	99,531	265,482
	<u>3,324,061</u>	<u>3,602,063</u>	<u>3,395,142</u>	<u>3,626,405</u>
TOTAL ASSETS	<u>15,717,257</u>	<u>16,133,703</u>	<u>15,790,733</u>	<u>16,160,364</u>
EQUITY AND LIABILITIES				
CAPITAL AND RESERVES				
Share capital	450,000	450,000	450,000	450,000
Share premium	648,000	648,000	648,000	648,000
Asset revaluation reserve	1,884,722	1,900,899	1,884,722	1,900,899
Retained earnings	3,716,438	4,086,892	3,798,332	4,135,404
Foreign currency translation reserve	<u>5,515</u>	<u>4,466</u>	-	-
TOTAL EQUITY	<u>6,704,675</u>	<u>7,090,257</u>	<u>6,781,054</u>	<u>7,134,303</u>
NON-CURRENT LIABILITIES				
Loan swap liability	1,667,493	1,895,374	1,667,493	1,895,374
Staff gratuity	917,954	677,904	917,954	677,904
Long - term loan	2,140,291	2,357,448	2,140,291	2,357,448
Obligations under finance leases	15,525	43,155	15,525	43,155
Deferred taxation	<u>759,030</u>	<u>750,087</u>	<u>759,030</u>	<u>750,087</u>
	<u>5,500,293</u>	<u>5,723,968</u>	<u>5,500,293</u>	<u>5,723,968</u>
CURRENT LIABILITIES				
Current portion of long - term loans	477,679	324,945	477,679	324,945
Post import finance loans	324,274	-	324,274	-
Obligations under finance leases	37,964	48,534	37,964	48,534
Bank overdraft	547,228	853,223	547,228	853,223
Trade and other payables	2,125,144	1,944,894	2,122,241	1,927,509
Provision for bonus and legal fees	-	<u>147,882</u>	-	<u>147,882</u>
	<u>3,512,289</u>	<u>3,319,478</u>	<u>3,509,386</u>	<u>3,302,093</u>

TOTAL EQUITY AND LIABILITIES 15,717,257 16,133,703 15,790,733 16,160,364

Required

- a. Calculate the key ratios both for the group and the company for the years 2020 and 2019 under each of the categories below to evaluate the financial performance of the company
1. Liquidity ratios.
 - Current ratio
 - Cash ratio
 2. Gearing/leverage/capital structure ratios.
 - Debt ratio
 - Capital gearing ratio
 - Interest cover ratio
 3. Profitability ratios.
 - Gross profit margin
 - Net profit margin
 - Return on capital employed
 - Return on equity
 4. Growth and valuation ratios.
 - Earnings per share
 - Price-earnings ratio given average share price for 2020 to be sh 53
 - Earning yield
- b. Provide a detailed analysis of the company performance, indicating whether you concur with the report provided by the management on the financial performance of the company.

SOLUTIONS

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

GROUP		Company	
2020	2019	2020	2019
<u>3,324,061</u>	<u>3,602,063</u>	<u>3,395,142</u>	<u>3,626,405</u>
3,512,289	3,319,478	3,509,386	3,302,093
0.95	1.09	0.97	1.1

A decrease in the current ratio was observed which represents that there has been deterioration in the liquidity position of the firm over the years. Given that the recommended ratio is 2:1 the firm ratio is below the recommended ratio signifying inability to pay current obligations.

Cash ratio	=	<u>Cash in hand/bank + short term marketable securities</u>		
		Current liabilities		
Short term deposits	31,366	29,558	31,366	29,558
Bank balances and cash	<u>131,293</u>	<u>373,062</u>	<u>99,531</u>	<u>265,482</u>
	<u>162,659</u>	<u>402,620</u>	<u>130,897</u>	<u>298,040</u>

GROUP		Company	
2020	2019	2020	2019
<u>162,659</u>	<u>402,620</u>	<u>130,897</u>	<u>298,040</u>
3,512,289	3,319,478	3,509,386	3,302,093
0.05	0.12	0.04	0.09

A ratio of not lower than 0.5 to 1 is usually preferred. From the values calculated the firm cash ratio is too low and this implies that the business will have difficulties paying its current obligations from the more liquid assets.

$$\text{Debt ratio} = \frac{\text{Total debts}}{\text{Total assets}} \times 100$$

GROUP		Company	
2020	2019	2020	2019
<u>5,500,293</u>	<u>5,723,968</u>	<u>5,500,293</u>	<u>5,723,968</u>
15,717,257	16,133,703	15,790,733	16,160,364
35%	35.47%	34.83%	35.42%

A debt ratio of 50% is considered as a safe limit. Based on this, it's evident that the firm has not acquired a lot of debt and therefore it can comfortably seek additional debt financing

$$\text{Capital gearing ratio} = \frac{\text{Interest bearing debt}}{\text{Shareholders equity} + \text{interest bearing debt}} \times 100$$

GROUP		Company	
2020	2019	2020	2019

<u>1,667,493 +2,140,291</u>	<u>1,895,374 +2,357,448</u>	<u>1,667,493 +2,140,291</u>	<u>1,895,374 +2,357,448</u>
1,667,493 +2,140,291 + 6,704,675	1,895,374 +2,357,448 + 7,090,257	1,667,493 +2,140,291 + 6,781,054	1,895,374 +2,357,448 +7,134,303
36.2%	37.5%	36%	37.3%

This ratio is a measure of the proportion of a business capital that is debt. A business with a capital gearing ratio of over 50% is said to be highly geared and thus risky to lend to.

$$\text{Interest cover} = \frac{\text{Profit before interest and tax}}{\text{Interest charges}}$$

Interest charges

GROUP		Company	
2020	2019	2020	2019
<u>(92,955)</u>	<u>340,931</u>	<u>(59,909)</u>	<u>314,546</u>
318,941	311,612	318,941	311,612
R.E.	1.09	R.E.	1.01

An interest cover of 2 times or less would be low, and should really exceed 3 times before a business entity interest costs can be considered to be within acceptable limits.

For the years with losses the interest will be paid from reserves or retained earnings (year 2020 for the group and the company).

$$\text{Gross profit margin} = \frac{\text{Gross profit}}{\text{Sales}} \times 100$$

Sales

GROUP		Company	
2020	2019	2020	2019
<u>2,395,572</u>	<u>2,333,323</u>	<u>2,357,293</u>	<u>2,272,706</u>
9,057,292	9,211,462	8,914,256	8,958,001
26.45%	25.33%	26.44%	25.37%

This ratio indicates the efficiency with which the business can generate a given level of profits out of its sales activities. If the ratio is high it may indicate;

A. Good management policies regarding control of costs.

B. That the business can produce at low cost.

A low ratio indicates that;

A. A higher cost of production than warranted.

B. Inefficient utilization of resources.

$$\text{Net profit margin} = \frac{\text{Net profit before interest and tax}}{\text{Sales}} \times 100$$

Sales

GROUP	Company
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$$\text{Earning per share} = \frac{\text{Earnings to ordinary shareholders}}{\text{Weighted number of ordinary shares}}$$

	GROUP		Company	
	2020	2019	2020	2019
Basic and diluted (\$)	(4.30)	19.73	(3.93)	19.38

A higher earnings per share is always better than a lower ratio because this means the company is more profitable and the company has more profits to distribute to its shareholders.

$$\text{Price earning ratio (P/E)} = \frac{\text{Market price per share}}{\text{Earnings per share}}$$

$$= \frac{53}{-4.3}$$

Negative EPS numbers are usually reported as "not applicable" for quarters in which a company reported a loss. Investors buying a company with a negative P/E should be aware that they are buying a share of a company that has been losing money per share of its stock.

$$\text{Earning yield} = \frac{\text{Earning per share}}{\text{Market price per share}} \times 100$$

$$= \frac{-4.3}{53} = -8.11\%$$

If a company loses money, the earnings yield is negative. This gives a more straightforward indication that the company is losing money.

Example two

The information below has been extracted from the recently published accounts of Gabby ltd;

Extracts from the income statement to 30th April 2020;

	2020 (000)	2019 (000)
Sales	11,200	9,750
Cost of sales	8,460	6,825
Net profit before tax	465	320

The following expenses were charged

Depreciation	360	280
Loan note interest	80	60
Interest on bank overdraft	15	9
Audit fees	12	10
Tax	40	30

Balance sheet as at 30th April;

	2020 (000)		2019 (000)	
Assets				
Fixed assets		1,850		1,430
Current assets				
Inventory	640		490	
Receivables	1,230		1,080	
Cash	<u>80</u>	<u>1,950</u>	<u>120</u>	<u>1,690</u>
Total assets		<u>3,800</u>		<u>3,120</u>
Equity and liabilities				
Ordinary share capital	800		800	
Retained earnings	<u>1,310</u>	2,110	<u>930</u>	1,730
Noncurrent liabilities				
10% loan stock		800		600
Current liabilities				
Bank overdraft	110		80	
Payables	750		690	
Taxation	<u>30</u>	<u>890</u>	<u>20</u>	<u>790</u>
		<u>3,800</u>		<u>3,120</u>

The following ratios were calculated by Gabby Ltd based on its published financial statements for 2016 and also the latest industry average ratios;

Gabby Ltd 2019

Industry average

Current ratio	2	1.9
Quick ratio	1.42	1.27
ROCE	16.7%	18.5%
Net profit margin	3.9%	4.73%
Asset turnover	4.29x	3.91x
Gross profit margin	30%	35.23%
Accounts receivable collection period	40 days	52 days
Accounts payable payment period	30 days	49 days
Inventory turnover	13.9x	18.3x
Capital gearing	26.37%	32.71%

Required

- Calculate comparable ratios for Gabby Ltd.
- Compare your results against the previous year's and against the industrial average.

Example three

It is now August 2020. In 2014, the current management team of Headwater, a manufacturer of car and motorcycle parts, bought the company from its conglomerate parent company in a management buyout deal. Six years on, the managers are considering the possibility of obtaining a listing for the company's shares on the stock market. The following information is available.

**HEADWATER
INCOME STATEMENT
FOR THE YEAR ENDED 30 JUNE 2020**

	\$ million
Turnover	36.5
Cost of sales	<u>(31.6)</u>
Profit before interest and taxation	4.9
Interest	<u>(1.3)</u>
Profit before taxation	3.6
Taxation	<u>(0.5)</u>
Profit attributable to ordinary shareholders	3.1
Dividends	<u>(0.3)</u>
Retained profit	<u>2.8</u>

**HEADWATER
STATEMENT OF FINANCIAL POSITION
AS AT 30 JUNE 2020**

	\$ million	\$ million
Non-current assets		

(at cost less accumulated depreciation)

Land and buildings		3.6
Plant and machinery		<u>9.9</u>
		13.5
Current assets		
Inventories	4.4	
Accounts receivable	4.7	
Cash at bank	<u>1.0</u>	<u>10.1</u>
		<u>23.6</u>
Equity and liabilities		
Ordinary sh1 shares		
Voting		1.8
Non-voting		0.9
Reserves		9.7
Long term liabilities		
12% Debentures		2.2
Current liabilities		
Trade accounts payable	7.0	
Bank overdraft	<u>2.0</u>	<u>9.0</u>
		<u>23.6</u>

Average performance ratios for the industry sector in which Headwater operates are given below.

Industry sector ratios

Current ratio	1.6:1
Quick (acid test) ratio	1.0:1
Debt ratio	24%
Dividends cover	4.0
Interest cover	4.5

Required

(a) Evaluate the financial state and performance of Headwater by comparing it with that of its industry Sector by calculating the above ratios.

(b) Discuss the probable reasons why the management of Headwater is considering a Stock Exchange listing.

References

ACCA Study text Paper F3 Financial Accounting (International).

<https://cdn.corporatefinanceinstitute.com/>

Sikidar, S., & Gautam, H. (2019). Financial statement analysis. Kolkata, India: New Central Book Agency (P) Ltd.

Subramanyam, K. R. (2014). Financial Statement Analysis (11th). Singapore: McGraw-Hill Education.