

### Aufgabe QR-5.2: Financial Statement Analysis (Jahresabschlussanalyse)

HUMANSDORP Ltd. reports the following balance sheet information for 20X3 and 20X4.

#### Humansdorp Ltd's STATEMENTS of FINANCIAL POSITION as of Dec 31, 20X3 and 20X4

	20X3	20X4
<b>Current assets</b>		
Cash	18.290	22.460
A/R	44.060	55.460
Inventory	<u>104.340</u>	<u>144.690</u>
	166.690	222.610
 <b>Non-current assets</b>		
Plant & equipment	<u>582.180</u>	<u>561.990</u>
	<u><u>748.870</u></u>	<u><u>784.600</u></u>
 <b>Current liabilities</b>		
A/P	149.940	144.730
Notes payable	<u>69.300</u>	<u>101.120</u>
	219.240	245.850
 <b>Long-term debt</b>	200.000	134.000
 <b>Owners' equity</b>		
Common stock	177.413	160.000
R/E	<u>152.217</u>	<u>244.750</u>
	<u><u>748.870</u></u>	<u><u>784.600</u></u>

Exhibit 1: Statements of financial position

Required: Determine the performance and liquidity of the business. Assume that HUMANSDORP had sales of 2,678,450.00 EUR and net profit of 132,190.00 EUR for the year ending 31.12.20X4. Interest was 5 % in 20X4. The shareholders get a dividend to be 42 % of the net profit after taxes (no consideration of profit carried forward). Assume a 1 EUR share of HUMANSDORP is traded at 4.55 EUR on 31.12.20X4. The redemption of shares took place on 1.01.20X4. Ignore § 150 AktG.

**Lösung (Solution)****(1) Performance measurement**

Fixed asset turnover = sales / (non-current assets) =  $2,678,450 / (0.5 \cdot (582,180 + 561,990)) = 4.68$

Inventory turnover = sales / inventory =  $2,678,450 / (0.5 \cdot (104,340 + 144,690)) = 21.51$

ROCE = net profit / (equity + long term liabilities) =  $132,190 / (0.5 \cdot (177,413 + 152,217 + 200,000 + 160,000 + 244,750 + 134,000)) = 0.25$

ROA = net profit / total of assets =  $132,190 / (0.5 \cdot (748,870 + 784,600)) = 0.17$

ROSF = net profit / equity =  $132,190 / (0.5 \cdot (177,413 + 152,217 + 160,000 + 244,750)) = 0.36$

Gross profit as percentage of sales = *cannot be calculated, no material expenses are known from the statement of comprehensive income*

Net profit as percentage of sales = net profit / sales =  $132,190 / 2,678,450 = 4.94\%$

EPS = net profit for SHs / amount of ordinary shares =  $(1 - 30\%) \cdot 132,190 / 160,000 = 0.58 \text{ EUR}$

EVA = net (operating) profit - WACC · (assets – short-term liabilities) =  $(1 - 30\%) \cdot 132,190 - [(5\% \cdot ((0.5 \cdot (200,000 + 134,000)) + 42\% \cdot (1 - 30\%) \cdot 132,190) / (0.5 \cdot (177,413 + 152,217 + 200,000 + 160,000 + 244,750 + 134,000)) \cdot (0.5 \cdot (748,870 + 784,600 - 219,240 - 245,850)) = 45,319.14 \text{ EUR}$

**(2) Liquidity ratios**

Current ratio = current assets / current liabilities =  $(0.5 \cdot (166,690 + 222,610)) / (0.5 \cdot (219,240 + 245,850)) = 0.84$

Acid test ratio = (current assets – inventory) / current liabilities =  $(0.5 \cdot (166,690 - 104,340 + 222,610 - 144,690)) / (0.5 \cdot (219,240 + 245,850)) = 0.30$

Cash ratio = cash / current liabilities =  $(0.5 \cdot (18,290 + 22,460)) / (0.5 \cdot (219,240 + 245,850)) = 0.09$

Debitors' collection days = *cannot be calculated due information missing*

Creditors' collection days = *cannot be calculated due information missing*

**(3) Capital structure ratios**

Gearing = interest bearing liabilities / total of assets =  $(0.5 \cdot (200,000 + 134,000)) / (0.5 \cdot (748,870 + 784,600)) = 0.22$

Debt ratio = liabilities / assets =  $(0.5 \cdot (200,000 + 219,240 + 134,000 + 245,850)) / (0.5 \cdot (748,870 + 784,600)) = 0.52$

Debt equity ratio = liabilities / equity =  $(0.5 \cdot (200,000 + 219,240 + 134,000 + 245,850)) / (0.5 \cdot (160,000 + 169,630 + 160,000 + 244,750)) = 1.09$

Working capital = current assets – current liabilities =  $(0.5 \cdot (166,690 + 222,610)) - (0.5 \cdot (219,240 + 245,850)) = -37,895.00 \text{ EUR}$

Interest cover = EBIT / Interest =  $132,190 + 0.05 \cdot ((0.5 \cdot (200,000 + 134,000)) / ((0.5 \cdot (200,000 + 134,000)) = 16.83$  (almost 22 days of the year)

(4) Market value ratios

P/E ratio = market value / EPS = 4.55 / 0.58 = **7.84**

Dividend yield = dividend / (share price · amount of shares) = 0.42 · 132,190 · (1 – 30%) / (4.55 · 160,000) = **5.34%**

Earnings yield = EPS / share price = 0.58 / 4.55 = **12.75**

Market/Book value = share price / (equity / amount of shares) = 4.55 / (0.5 · (177,413 + 152,217 + 160,000 + 244,750) / 160,000) = **1.98**

(5) Horizontal analysis:

<b>Humansdorp Ltd's STATEMENTS of FINANCIAL POSITION as of Dec 31, 20X3 and 20X4</b>				
	20X3	20X4	20X4-20X3	%
<b>Current assets</b>				
Cash	18.290	22.460	4.170	19%
A/R	44.060	55.460	11.400	21%
Inventory	104.340	144.690	40.350	28%
	<u>166.690</u>	<u>222.610</u>	<u>55.920</u>	<u>25%</u>
<b>Non-current assets</b>				
Plant & equipment	582.180	561.990	(20.190)	-4%
	<u>748.870</u>	<u>784.600</u>	<u>35.730</u>	<u>5%</u>
<b>Current liabilities</b>				
A/P	149.940	144.730	(5.210)	-4%
Notes payable	69.300	101.120	31.820	31%
	<u>219.240</u>	<u>245.850</u>	<u>26.610</u>	<u>11%</u>
<b>Long-term debt</b>	200.000	134.000	(66.000)	-49%
<b>Owners' equity</b>				
Common stock	177.413	160.000	(17.413)	-11%
R/E	152.217	244.750	92.533	38%
	<u>748.870</u>	<u>784.600</u>	<u>35.730</u>	<u>5%</u>

**Exhibit 2:** Horizontal analysis

(6) Vertical analysis

**Humansdorp Ltd's  
STATEMENTS of FINANCIAL POSITION  
as of Dec 31, 20X3 and 20X4**

	20X3	20X4	%(20X4)
<b>Current assets</b>			
Cash	18.290	22.460	3%
A/R	44.060	55.460	7%
Inventory	<u>104.340</u>	<u>144.690</u>	18%
	166.690	222.610	28%
<b>Non-current assets</b>			
Plant & equipmer	<u>582.180</u>	<u>561.990</u>	72%
	<u><u>748.870</u></u>	<u><u>784.600</u></u>	100%
<b>Current liabilities</b>			
A/P	149.940	144.730	18%
Notes payable	<u>69.300</u>	<u>101.120</u>	13%
	219.240	245.850	31%
<b>Long-term debt</b>	200.000	134.000	17%
<b>Owners' equity</b>			
Common stock	177.413	160.000	20%
R/E	<u>152.217</u>	<u>244.750</u>	31%
	<u><u>748.870</u></u>	<u><u>784.600</u></u>	100%

Exhibit 3: Vertical analysis