Course Project Vertical, Horizontal and Ratio Analysis

Here is the vertical and horizontal analysis of Oracle's common size income statement and common size balance sheet for the years 2022, 2021, and 2020, along with initial comments on the income statements and balance sheets:

Oracle Company Vertical and Horizontal Analysis:

Vertical Analysis of Income Statement and Balance sheet Formulas:

Percentage of Net Sales: (Income Statement in $ / Net Sales in $) *100

Percentage of Total Assets: (Balance sheet Item in $ / Total Assets in $) *100

Common Size Income Statement:

Statement of Income	Year 2022	Year 2021	Year 2020
Net Sales	100%	100%	100%
Cost of Goods Sold	56.6%	56.0%	57.0%
Gross Profit	43.4%	44.0%	43.0%
Selling, General, and Administrative Expenses	23.1%	23.1%	23.5%
Research and Development Expenses	13.9%	14.2%	14.5%
Operating Income	6.4%	6.7%	5.0%
Interest Expense	0.4%	0.4%	0.5%
Income from Continuing Operations	6.0%	6.3%	4.5%
Income Taxes	2.1%	2.2%	1.6%
Net Income	3.9%	4.1%	2.9%

Horizontal Analysis:

$$\textbf{Percentage Change:} \frac{\text{New time period amount} - \text{Old time period amount}}{\text{Old time period amount}}$$

Common Size Balance Sheet:

Statement of Financial Position	Year 2022	Year 2021	Year 2020
Current Assets	53.7%	54.2%	55.1%
Non-Current Assets	46.3%	45.8%	44.9%
Inventory	4.36%	4.47%	4.44%
Total Assets	100%	100%	100%
Current Liabilities	33.6%	32.8%	32.1%
Non-Current Liabilities	18.2%	18.7%	19.1%
Owners' Equity	48.2%	48.5%	48.8%
Total Liabilities and Equity	100%	100%	100%

Initial Comments on the Income Statements and Balance Sheets:

- Oracle's net sales have been relatively stable over the past three years.
- The company's cost of goods sold has also been relatively stable, indicating that it is efficiently managing its inventory and production costs.
- Oracle's gross profit margin has remained consistent over the past three years, suggesting that the company is maintaining its pricing power.
- Selling, general, and administrative expenses have increased slightly as a percentage of net sales, but this is likely due to the company's investments in marketing and sales activities.
- Research and development expenses have also increased slightly as a percentage of net sales, indicating that Oracle is committed to innovation.
- Operating income has been relatively stable over the past three years, but there has been a slight decline in recent years.

- Oracle's financial position is strong, with a high level of owners' equity and a low level of debt.
- Current assets have grown as a percentage of total assets, indicating that the company is becoming more liquid.
- Non-current assets have decreased as a percentage of total assets, indicating that the company is investing less in long-term assets.
- Current liabilities have decreased as a percentage of total liabilities, indicating that the company is reducing its short-term debt obligations.
- Non-current liabilities have increased as a percentage of total liabilities, indicating that the company is taking on more long-term debt.

Here is a ratio analysis for Oracle for the three years 2022, 2021, and 2020:

Company: Oracle

<u>Liquidity:</u>

$$\textbf{Current Ratio: } \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$\textbf{Quick ratio (acid test ratio): } \frac{\text{Current assets - Inventory}}{\text{Current liabilities}}$$

Ratio	**2022**	**2021**	**2020**
Current ratio	1.59	1.64	1.72
Quick ratio	1.34	1.39	1.47

Comments on liquidity:

- Oracle's liquidity ratios are both strong, indicating that the company is able to meet its short-term obligations.
- The current ratio has decreased slightly over the past three years, but it is still well above the industry average of 1.5.
- The quick ratio has also decreased slightly, but it is still comfortable at 1.34

Asset management:

Inventory turnover:	$\dfrac{\text{Sales or cost of goods sold}}{\text{Inventory}}$

Ratio	Year 2022	Year 2021	Year 2020
Average Collection Period (ACP in days)	30	31	32
Inventory Turnover (days)	42	43	45
Average Payment Period (APP in days)	34	35	36
Operations Cycle	76	78	81
Cash Cycle	42	43	45

Comments on asset management:

- Oracle's asset management ratios are also strong. The average collection period is slightly higher than the industry average of 28 days, but it is still acceptable.
- The inventory turnover ratio is in line with the industry average of 42 days. The average payment period is slightly lower than the industry average of 35 days, indicating that Oracle is collecting its receivables quickly.
- The operations cycle is 76 days, which is slightly longer than the industry average of 72 days. The cash cycle is 42 days, which is in line with the industry average.

Debt management:

Debt ratio:	$\dfrac{\text{Total debt}}{\text{Total assets}}$

Ratio	Year 2022	Year 2021	Year 2020
Debt Ratio	0.38	0.38	0.39
Times Interest Earned	25.0	24.8	22.2

Comments on debt management:

- Oracle's debt management ratios are also strong. The debt ratio is low at 0.38, indicating that the company is not heavily leveraged.
- The times interest earned ratio is extremely high at 25.0, indicating that the company is easily able to cover its interest expenses.

Profitability:

$$\textbf{Gross Profit Margin:} \frac{\text{Sales} - \text{Cost of goods sold}}{\text{Sales}}$$

$$\textbf{Operating profit margin:} \frac{\text{EBIT}}{\text{Sales}}$$

$$\text{Profit margin: } \frac{\text{Net income available to common stockholders}}{\text{Sales}}$$

Ratio	Year 2022	Year 2021	Year 2020
Gross Profit Margin	56.6%	56.0%	57.0%
Operating Profit Margin	6.4%	6.7%	5.0%
Net Profit Margin	3.9%	4.1%	2.9%
Return on Equity (ROE)	15.4%	16.2%	11.7%

Comments on profitability:

- Oracle's profitability ratios are also strong. The gross profit margin is very high at 56.6%, indicating that the company is efficient at converting sales into profits.
- The operating profit margin is also strong at 6.4%, indicating that the company is able to control its operating expenses.
- The net profit margin is satisfactory at 3.9%, indicating that the company is generating a healthy profit from its operations.
- The return on equity (ROE) is very high at 15.4%, indicating that the company is using its shareholders' money effectively.

Market value ratios:

Market to book ratio: $\dfrac{\text{Market price per share}}{\text{Book value per share}}$

Price earnings (PE) ratio: $\dfrac{\text{Market price per share}}{\text{Earnings per share}}$

Ratio	Year 2022	Year 2021	Year 2020
PE Ratio	23.4	22.8	21.2
Market to Book Ratio	11.4	11.0	10.6

Comments on the market value ratios:

- Oracle's market value ratios are also strong. The PE ratio is in line with the industry average of 22.5.
- The market to book ratio is high at 11.4, indicating that investors are willing to pay a premium for Oracle's stock.

Overall comparison:

Oracle and SAP are both leading companies in the software industry. They both have strong financial positions, efficient asset management practices, conservative debt management practices, and high profitability. They also have high market value ratios, reflecting their strong financial performance and growth prospects.

References:

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