ACC100: FINANCIAL STATEMENT ANALYSIS

ACC100 ONLINE TEXTBOOK, WRITTEN BY ELSE GRECH AND CHERYL DYSON WITH EDITS BY JOEL SHAPIRO

Horizontal Analysis

- Calculates the trend between one year and the next
- Identifies important trends and allows the owner to see the business as a whole and the direction it is heading in
- Calculation: [(current year – base year) / base year] * 100
    - Always calculated using the same element / account over two different years
- In the examples below, 2015 is used as the base year

Horizontal Analysis of Income Statement – Example

ABC Company Year Ended December 31, 2019			
	2016	**2015**	**Horizontal Analysis**
Net Sales	150,000	130,000	15.4%
Cost of Goods Sold	30,000	25,000	20.0%
Gross Profit	120,000	105,000	14.3%
Operating Expenses	85,000	70,000	21.4%
Interest Expense	3,000	2,500	20.0%
Profit Before Income Taxes	35,000	32,500	7.69%
Income Tax Expense	2,500	2,000	25.0%
Profit	32,500	30,500	6.6%

Horizontal Analysis of Balance Sheet – Example

ABC Company At December 31, 2019			
	2016	**2015**	**Horizontal Analysis**
Cash	17,000	15,000	13.3%
Accounts Receivable	26,000	25,000	4.0%
Inventory	40,000	30,000	33.3%
Property, Plant & Equipment	60,000	60,000	0.0%
Total Assets	143,000	130,000	10.0%
Current Liabilities	20,000	15,000	33.3%
Long-Term Liabilities	45,000	40,000	12.5%
Retained Earnings	55,000	50,000	10.0%
Owner's Capital	23,000	25,000	-8.0%
Total Liabilities and Equity	143,000	130,000	10.0%

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Vertical Analysis

- Shows the relationship between different items on the same financial statement
- Vertical analysis on the Income Statement
  - Calculates all accounts / elements as a percentage of Net Sales
  - Net Sales = 100%
- Vertical analysis on the Balance Sheet
  - Calculates all accounts / elements as a percentage of Total Assets or Total Liabilities and Equity
  - Total Assets = 100%
  - Total Liabilities and Equity = 100%

Vertical Analysis of Income Statement – Example

	2016	Vertical Analysis
Net Sales	150,000	100.0%
Cost of Goods Sold	30,000	20.0%
Gross Profit	120,000	80.0%
Operating Expenses	85,000	56.7%
Interest Expense	3,000	2.0%
Profit Before Income Taxes	35,000	23.3%
Income Tax Expense	2,500	1.7%
Profit	32,500	21.7%

Vertical Analysis of Balance Sheet – Example

	2016	Vertical Analysis
Cash	17,000	11.9%
Accounts Receivable	26,000	18.2%
Inventory	40,000	28.0%
Property, Plant & Equipment	60,000	42.0%
Total Assets	143,000	100%
Current Liabilities	20,000	14.0%
Long-Term Liabilities	45,000	31.5%
Retained Earnings	55,000	38.5%
Owner's Capital	23,000	16.1%
Total Liabilities and Equity	143,000	100%

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Profitability Ratios

Ratio	Formula	Example	Notes
Gross Profit Ratio	(Gross Profit / Net Sales) * 100	Net Sales = 150,000 Gross Profit = 120,000 Gross Profit Ratio = (120,000 / 150,000) * 100 = 80%	What numbers are good for the profitability ratios? - depends on the industry average - in general, high percentages are good - should be increasing or stable from year to year
Net Profit Ratio	(Net Income / Net Sales) * 100	Net Sales = 150,000 Net Profit = 32,500 Net Profit Ratio = (32,500 / 150,000) * 100 = 21.7%	

Liquidity Ratios

Liquidity: the ability of a company to pay its liabilities as they come due

Ratio	Formula	Example	Notes
Working Capital	Current Assets – Current Liabilities	Current Assets = 83,000 Current Liabilities = 20,000 Working Capital = 63,000	
Current Ratio	Current Assets / Current Liabilities	Current Assets = 83,000 Current Liabilities = 20,000 Current Ratio = 83,000 / 20,000 = 4.15 to 1	What numbers are good for this ratio? - depends on the industry average - higher is better to a certain point - it is possible for a company to have too much cash sitting in a bank account
Quick Ratio (also called acid-test ratio)	(Cash + Accounts Receivable) / Current Liabilities	Cash = 17,000 Accounts Receivable = 26,000 Current Liabilities = 20,000 Quick Ratio = (17,000 + 26,000) / 20,000 = 2.15 to 1	What numbers are good for this ratio? - depends on the industry average - it is often less than 1 to 1, so anything more is good

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Solvency Ratios

Solvency: a company's ability to pay its long-term debt (a measure of risk – more long-term debt means more risk in terms of ultimate survival)

Ratio	Formula	Example	Notes
Debt to Equity Ratio	Total Liabilities / Total Equity	Total Liabilities = 65,000 Total Equity = 78,000 Debt to Equity Ratio = 65,000 / 78,000 = 0.83 to 1	What are good numbers for the solvency ratios? - depends on the industry average - in general, lower numbers are better
Debt to Total Assets Ratio	Total Liabilities / Total Assets	Total Liabilities = 65,000 Total Assets = 143,000 Debt to Total Assets Ratio = 0.45 to 1	

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Efficiency Ratios

Efficiency: how well a company is managing its assets and liabilities

Ratio	Formula	Example	Notes
Accounts Receivable (A/R) Turnover	Net Sales / Average Accounts Receivable over the past 2 years	Net Sales = 150,000 A/R 2016 = 26,000 A/R 2015 = 25,000 Accounts Receivable Turnover = 150,000 / [(26,000 + 25,000) / 2] = 5.88 Accounts Receivable Turnover in days = 365 / 5.88 = 62.07 days Meaning of Example - the company's Accounts Receivable were collected and replaced by new ones 5.88 times over the year (every 62.07 days)	What numbers are good for efficiency ratios? - depends on the industry average and past years - for A/R turnover, it also depends on the credit terms - in general, lower numbers are better
Inventory Turnover	Cost of Goods Sold / Average Inventory over the past 2 years	COGS = 65,000 Inventory 2016 = 40,000 Inventory 2015 = 30,000 Inventory Turnover = 65,000 / [(40,000 + 30,000) / 2] = 1.86 times Inventory Turnover in days = 365 / 1.86 = 196.24 days Meaning of Example - the company's inventory is sold and replaced by new items 1.86 times over the year (every 196.24 days)	

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