

ACC1701X
ACCOUNTING FOR DECISION MAKERS
SEMESTER 1 2022 / 2023

TUTORIAL 11 ANSWER SOLUTION
Financial Statement Analysis

Understanding Financial Statements – Samsung

Decompose Samsung's Return on Equity (ROE) which is attributable to owners using a DuPont framework analysis for the financial years of 2021 and 2020. Interpret the performance of Samsung along the three dimensions of the DuPont model.

Note: Please use the version of DuPont model that is covered in the lecture/textbook.

<u>DUPONT ANALYSIS</u>	Profitability (Profit Margin)	Efficiency (Total Assets Turnover)	Leverage (Assets to Equity Ratio)
Return on Equity (Attributable to Owners)	Net Income (attributable to owners)	Net Sales	Average Total Assets
=	Net Sales	x	Average Total Assets
		x	Average Total Equity (attributable to owners)
2021 ROE	= $\frac{39,243,791}{279,604,799}$	x $\frac{279,604,799}{402,428,438^{(a)}}$	x $\frac{402,428,438}{281,954,014^{(b)}}$
	= 0.14	x 0.69	x 1.43
	= 0.14		
2020 ROE	= $\frac{26,090,846}{236,806,988}$	x $\frac{236,806,988}{365,400,108^{(a)}}$	x $\frac{365,400,108}{261,292,902^{(b)}}$
	= 0.11	x 0.65	x 1.40
	= 0.10		

Samsung's ROE in 2021 is 0.14, which is slightly higher than 2020 (0.10). By decomposing the ROE using the DuPont framework, it can be seen that there were improvements along the three dimensions which resulted in the increase in ROE:

- (1) Profitability – The company's ability to generate profit from each dollar of sales improved slightly in 2021, as profit margin increased from 0.11 to 0.14.
- (2) Efficiency – The company's ability to generate sales from the use of its assets also improved slightly in 2021, as total assets turnover increase from 0.65 to 0.69.
- (3) Leverage – There was a slight increase in the use of leverage in 2021, which also helped to contribute to better return for equity holders.

<u>Working Calculations:</u>		2021	2020
	Total Assets - Beginning	378,235,718	352,564,497
	Total Assets - Ending	426,621,158	378,235,718
(a)	Average Total Assets	402,428,438	365,400,108
	Total Equity (owners) - Beginning	267,670,331	254,915,472
	Total Equity (owners) - Ending	296,237,697	267,670,331
(b)	Average Total Equity (owners)	281,954,014	261,292,902

Alternative DuPont Calculation:

DuPont Analysis can also be calculated using net income and total equity as follows:

<u>DUPONT ANALYSIS</u>	Profitability (Profit Margin)		Efficiency (Total Assets Turnover)		Leverage (Assets to Equity Ratio)
Return on Equity	= $\frac{\text{Net Income}}{\text{Net Sales}}$	x	$\frac{\text{Net Sales}}{\text{Average Total Assets}}$	x	$\frac{\text{Average Total Assets}}{\text{Average Total Equity}}$
2021 ROE	= $\frac{39,907,450}{279,604,799}$	x	$\frac{279,604,799}{402,428,438^{(a)}}$	x	$\frac{402,428,438}{290,423,974^{(c)}}$
	= 0.14	x	0.69	x	1.39
	= 0.14				
2020 ROE	= $\frac{26,407,832}{236,806,988}$		$\frac{236,806,988}{365,400,108^{(a)}}$		$\frac{365,400,108}{269,414,219^{(c)}}$
	= 0.11	x	0.65	x	1.36
	= 0.10				

<u>Working Calculations:</u>		2021	2020
	Total Equity - Beginning	275,948,016	262,880,421
	Total Equity - Ending	304,899,931	275,948,016
(c)	Average Total Equity	290,423,974	269,414,219

SSA Textbook Tutorial Assignment:

E 15-9 (LO3) Financial Statement Analysis

The easiest way to approach this exercise is to prepare the statement of profit and loss (income statement).

Jacob Company
Statement of Profit and Loss
For the Year Ended December 31, 2022

Sales		\$1,580,000
Cost of goods sold		<u>970,000</u>
Gross profit on sales		\$610,000
Operating expenses:		
Other operating expenses	\$393,000	
General and administrative expenses	<u>160,000</u>	
Total operating expenses		<u>553,000</u>
Income from operations		\$ 57,000
Other expenses:		
Interest expense		<u>17,000</u>
Income before taxes		\$ 40,000
Taxes		<u>16,000</u>
Net income		<u><u>\$ 24,000</u></u>

Answers to specific questions:

1. Gross profit = \$610,000
2. Income from operations = \$57,000
3. Other operating expenses = \$393,000
Amount needed to make total operating expenses = \$553,000
4. Gross profit percentage = $\$610,000 / \$1,580,000 = 38.61\%$
5. Average total assets = $\$24,000 / 0.04 = \$600,000$
6. Average total equity = $\$24,000 / 0.08 = \$300,000$
7. Return on sales = $\$24,000 / \$1,580,000 = 1.52\%$
8. Income tax rate = $\$16,000 / \$40,000 = 40\%$

P 15-16 (LO3) Computing Amounts from Financial Ratios

1. Inventory turnover = 3.6

$$3.6 \times €95,000 = \text{Cost of goods sold}$$
$$\text{Cost of goods sold} = €342,000.$$

2. Accounts receivable turnover = 8.6

$$8.6 \times €49,750 = \text{Net sales (credit)} = €427,850.$$

3. Return on equity = 20% = $\frac{\text{net income}}{\frac{(200,000 + 67,000 + 200,000 + 61,000)}{2}}$
- $$.20 \times €264,000 = \text{Net income} = €52,800.$$

4. Return on assets = 25% = $\frac{52,800}{\text{average assets}}$

$$\text{Average assets} = \frac{52,800}{0.25} = €211,200$$

$$\frac{\text{Total assets} + 325,000}{2} = €211,200$$
$$\text{Total assets} = 97,400$$
