

## Fall 2023 Honors Project – Financial Statement Analysis

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1. The link to the 10-K filings of Apple and Microsoft in 2022:

- Apple: <https://d18rn0p25nwr6d.cloudfront.net/CIK-0000320193/b4266e40-1de6-4a34-9dfb-8632b8bd57e0.pdf>
- Microsoft: <https://microsoft.gcs-web.com/static-files/07cf3c30-cfc3-4567-b20f-f4b0f0bd5087>

3. We have already calculated component percentages for both Apple and Microsoft in the Excel file, with % of Total Assets in the balance sheets and % of Net Sales in the income statements.

Next, here are some ratios that we think will be beneficial to analyze our companies' performance:

		2022	2021	2020
1. Gross profit margin ratio = $\frac{\text{Gross Profit}}{\text{Net Sales Revenue}}$	Apple	43.3%	41.8%	38.2%
	Microsoft	68.4%	68.9%	67.8%
2. Net profit margin ratio = $\frac{\text{Net Income}}{\text{Net Sales Revenue}}$	Apple	25.3%	25.9%	20.9%
	Microsoft	36.7%	36.5%	31.0%
3. Earnings per share (basic) (this ratio is calculated by both the companies themselves in their financial statements)	Apple	6.15	5.67	3.31
	Microsoft	9.70	8.12	5.82
4. Total asset turnover ratio = $\frac{\text{Net Sales Revenue}}{\text{Average Total Assets}}$	Apple	1.12	1.08	0.83
	Microsoft	0.57	0.53	0.49

5. Current Ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$	Apple	0.88	1.07	1.36
	Microsoft	1.78	2.08	2.52

*Note:* To calculate the total asset turnover ratio, we also looked at the 10-K filings for the year 2020 to find out the correct beginning and ending balances that are needed to calculate the average.

This is the link to the 10-K filings of both companies in the year 2020:

- Apple: <https://d18rn0p25nwr6d.cloudfront.net/CIK-0000320193/7b5717ca-6222-48e6-801c-9ea28feef86.pdf>
- Microsoft: <https://microsoft.gcs-web.com/static-files/4e7064ed-bbf7-4140-a8cb-79aba77421b9>

4. ROE and ROA are calculated in the Excel file in the Stockholders' Equity sheets.

5.

a. ROE = net profit margin × total asset turnover × financial leverage

b. ROA = net profit margin × total asset turnover

6.

#### **Investigating differences in net profit margin:**

The net profit margin ratio of Apple in 2020 was 20.9%, which increased to 25.9% in 2021. It then decreased to 25.3% in 2022.

The net profit margin ratio of Microsoft in 2020 was 31.0%, which increased to 36.5% and 36.7% in 2021 and 2022, respectively.

Comparing these statistics, Microsoft had a higher net profit margin ratio than that of Apple during the period from 2020 to 2022.

#### **Investigating differences in total asset turnover:**

The total asset turnover ratio of Apple in 2020 was 0.83, which increased to 1.08 and 1.12 in 2021 and 2022, respectively.

The total asset turnover ratio of Microsoft in 2020 was 0.49, which increased to 0.53 and 0.57 in 2021 and 2022, respectively.

Comparing these statistics, Apple had a higher total asset turnover ratio than that of Microsoft during the period of 2020-2022.

## 7.

The two tech giants, Apple and Microsoft, have been engaging in a fierce rivalry for decades. This essay delves into a comprehensive comparison of Apple and Microsoft's financial performance from 2020 to 2022.

Both companies showed impressive growth in net sales and net income. Specifically, while Apple's revenue grew by 43.65% between 2020-2022, that of Microsoft rose by 38.64%. Net income also observed an upward trend in both companies, with 73.84% for Apple and 64.26% for Microsoft. Thus, Apple and Microsoft are highly profitable, but Apple saw more pronounced increases in both revenue and net income.

Even though the gross and net profit margin ratios of Microsoft experienced slightly fluctuating growth, they were relatively higher than those of Apple from 2020 to 2022. However, Apple's total asset turnover was 1.12 in 2022, almost doubling that of Microsoft (0.57). Therefore, the ROA of Apple was 28.36%, approximately 7.54% higher than that of Microsoft. This indicated that Apple utilized its assets to generate income more effectively than Microsoft. Additionally, the observed increases in both companies' EPS demonstrated that their stockholders are likely to continue experiencing both capital and revenue gains going forward.

In terms of financial stability, we can compare the current ratio to analyze both companies' ability to meet their short-term obligations. For the most recent financial period, the current ratios for Apple and Microsoft are 0.88 and 1.78, respectively. Thus, Microsoft has a greater likelihood of settling its short-term liabilities.

## 8. Before investing in either company, the information that we would like to have includes:

- ROE (return on investment)
- Debt-to-equity ratio
- Stock price performance
- Dividends policy, as well as the dividend yield ratio.
- Economy-wide factors (unemployment rate, general inflation rate, or changes in interest rates)
- Industry factors (tech industry)
- Company's risk profiles (historical performance & debt levels)

These statistics and information indicate financial stability and risk assessment, especially in economic downturns or rising interest rates. Understanding the context of these metrics and the growth and expansion insight of the company compared to the market helps in evaluating if the company's debt is a strategic move for growth. The company's ability to maintain sustainable

dividend payments is also necessary for income-focused investors. ROE also determined whether the company could produce a better return on its owners' investment. Thus, by gaining insights into whether a company's financial health is improving or deteriorating, multiple factors can be considered for a comprehensive evaluation before making investment decisions.