Financial Analysis of Apple Inc.

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Abstract

The purpose of this paper is to analyze Apple Inc's financial standing with Microsoft Corporation by analyzing five-year data (2015-2019) using income statements and balance sheets from S&P Capital IQ. The analysis will be divided into five ratio groups as follows: short term solvency ratios, long term solvency ratios, asset management ratios, profitability ratios, market value ratios. Conceptual information about each ratio analysis is derived from Fundamentals of Corporate Finance by Ross, Westerfield, and Jordan. These financial metrics will help compare Apple's financial standing with Microsoft.

Major Competitor

Apple Inc. and Microsoft Corporation are heavy hitters and staunch rivals in the technological sector. Despite differences in specialization, both companies are deemed as competitors because of their head-to-head competition in developing software. In this paper, we compare their financials head-to-head and study their strengths and weaknesses.

Procedure

To ensure accuracy and consistency when comparing Apple and Microsoft's financials, we will be analyzing five-year data (2015-2019) from S&P Capital IQ. Income statements and balance sheets from each firm between 2015-2019 will be downloaded and used to compute these ratios.

1. Short Term Solvency Ratios

The current ratio depicts a firm's financial standing by comparing its current assets to current liabilities. A quick ratio measures a firm's current assets minus the inventory over the current liabilities. The cash ratio measures a firm's cash to liabilities ratio and is computed by the amount of cash over current liabilities. Net working capital (NWC) to total assets measures the firm net working capital (current assets – current liabilities) divided by the total assets of the firm.

Microsoft beats Apple significantly in all four ratios. The changes in Microsoft year-over-year are also less volatile when compared to Apple. Microsoft has more current assets but lower current liabilities. This can be attributed to higher ratios compared to Apple. Apple has higher total assets compared to Microsoft.

Apple

I. Short Term Solvancy Ratios	2015	2016	2017	2018	2019
Current Ratio (x)	1.1088	1.3527	1.2761	1.1329	1.5401
Quick Ratio (x)	1.0796	1.3257	1.2279	1.0988	1.5013
Cash Ratio (%)	52.10%	85.00%	73.58%	57.19%	95.12%
Net Working Capital to Total Assets (%)	3.02%	8.66%	7.42%	4.21%	16.87%

Microsoft

I. Short Term Solvancy Ratios	2015	2016	2017	2018	2019
Current Ratio (x)	2.4734	2.3529	2.9186	2.9008	2.5288
Quick Ratio (x)	2.4149	2.3150	2.8795	2.8553	2.4991
Cash Ratio (%)	194.15%	190.44%	238.41%	228.53%	192.79%
Net Working Capital to Total Assets (%)	41.93%	41.51%	42.73%	42.95%	37.04%

Apple

II. Long Term Solvency Ratios	2015	2016	2017	2018	2019
Total Debt Ratio (%)	54.100%	62.786%	64.959%	68.044%	64.290%
Debt Equity Ratio (x)	1.1786	1.6872	1.8538	2.1293	1.8003
Equity Multiplier (x)	2.1786	2.6872	2.8538	3.1293	2.8003
Long Term Debt Ratio* (%)	35.844%	46.315%	54.920%	58.715%	52.873%
Times Interest Earned Ratio (x)	0.001	0.013	0.028	0.015	-0.002

Microsoft

II. Long Term Solvency Ratios	2015	2016	2017	2018	2019
Total Debt Ratio (%)	58.892%	60.132%	64.285%	70.703%	73.269%
Debt Equity Ratio (x)	1.4326	1.5083	1.7999	2.4133	2.7410
Equity Multiplier (x)	2.4326	2.5083	2.7999	3.4133	3.7410
Long Term Debt Ratio* (%)	43.092%	47.153%	51.168%	57.106%	61.130%
Times Interest Earned Ratio (x)	119.168	46.415	10.013	23.418	28.119

2. Long Term Solvency Ratios

The total debt ratio is computed by the total liabilities over total assets. The ratio measures the amount of liabilities against assets and paints a picture of what the firm owns and what it owes. The debt-equity ratio is computed by taking the total liabilities over total equity, showing what the firm owes and what the stockholders own. The equity multiplier is computed by total assets over the total stockholder's equity. The multiplier shows the percentage of assets financed by the shareholders. The long-term debt ratio is the long-term equity over the long-term debt and measures the long-term debt against the equity a firm has. The times interest earned ratio is EBIT[1] over interest owed and measures the amount of income financed by the interest.

Apple and Microsoft had similar total debt, debt-equity, equity multiplier, and long-term debt ratios. The biggest difference was the times interest earned ratio, with Microsoft having a much larger one.

3. Asset Management Ratios

The inventory turnover is the cost of goods sold over average inventories and indicates how well a firm can sell their inventory. The days' sales in inventory is computed by 365/inventory turnover. Receivable turnover is computed by net sales

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[1] Earnings before interest and taxes = net income – cost of goods sold – operating expenses

Apple

III. Asset Management Ratios	2015	2016	2017	2018	2019
Inventory Turnover (x)	59.638	61.621	29.052	41.394	39.401
Days' Sales in Inventory (Day)	6.120	5.923	12.564	8.818	9.264
Receivable Turnover (x)	7.702	7.360	6.426	5.421	5.680
Days' Sales in Receivables (Day)	47.388	49.593	56.801	67.332	64.259
Fixed Asset Turnover (x)	10.401	7.984	6.785	6.430	6.961
Total Asset Turnover (x)	0.805	0.670	0.611	0.726	0.769

Microsoft

III. Asset Management Ratios	2015	2016	2017	2018	2019
Inventory Turnover (x)	11.385	14.562	15.709	14.408	20.800
Days' Sales in Inventory (Day)	32.061	25.065	23.235	25.334	17.548
Receivable Turnover (x)	5.226	4.987	4.305	4.168	4.262
Days' Sales in Receivables (Day)	69.848	73.185	84.780	87.582	85.633
Fixed Asset Turnover (x)	6.353	4.966	3.188	3.053	2.869
Total Asset Turnover (x)	0.536	0.471	0.386	0.426	0.439

over the monetary of receivables. To get the days it takes to sell the receivables, we divide 365 by the receivable turnover. The fixed asset is computed by net sales over fixed assets. Similarly, to get the total asset turnover, we divide net sales by the total assets.

Microsoft holds its inventory almost thrice as long as Apple and the days' sales in receivables is significantly longer for Microsoft than Apple as well. These metrics are significant as they show how long it takes for each firm to sell their goods.

4. Profitability Ratios

The profit margin indicates the amount of income the firm can produce from net sales. The profit margin is calculated by the net income[2] over the net sales. The operating margin calculates the operating income[3] over the net sales. The gross margin calculates is gross income[4] over the net sales. Return on assets is computed by dividing net income by average total assets and this metric tells us how much income is generated by total assets. Return on equity is computed when

Apple

IV. Profitability Ratios**	2015	2016	2017	2018	2019
Profit Margin (%)	22.846%	21.187%	21.092%	22.414%	21.238%
Operating Margin (%)	30.477%	27.835%	26.760%	26.694%	24.572%
Gross Margin (%)	40.060%	32.228%	33.828%	32.935%	31.711%
Return on Assets (%)	18.390%	14.202%	12.883%	16.278%	16.323%
Return on Equity ** (%)	44.735%	9.361%	4.818%	10.205%	10.790%

Microsoft

IV. Profitability Ratios**	2015	2016	2017	2018	2019
Profit Margin (%)	13.029%	22.532%	26.394%	15.015%	31.182%
Operating Margin (%)	30.105%	29.826%	30.372%	31.767%	34.137%
Gross Margin (%)	64.695%	64.039%	64.522%	65.247%	65.902%
Return on Assets (%)	6.989%	10.616%	10.183%	6.402%	13.694%
Return on Equity ** (%)	15.225%	9.361%	4.818%	10.205%	10.790%

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[2] Net income = net sales – cost of goods sold – operating expenses – interest - taxes
[3] Operating income = net sales – cost of goods sold – operating expenses

[4] Gross income = net sales – cost of goods sold

net income is divided by the stockholders' equity and tells us the amount of income generated by the stockholders' equity.

Apple tends to have a higher profit margin than Microsoft; however, both firms have similar operating margins. Microsoft beats Apple in gross margin, but Apple takes over Microsoft in return on assets and return on equity.

5. Market Value Ratios

The earning per share is computed by the net income over the number of shares outstanding and indicates how income is earned for each stock. The dividend ratio is the dividends paid by the number of shares outstanding and shows the amount of dividends stockholders earn for each stock owned. The dividend payout ratio measures the amount of money paid stockholders and reinvested in the company for future growth or debt payment. The ratio is calculated by dividends paid over net income. The price earnings ratio is a metric used to analyze a company's valuation (whether they are overvalued or undervalued) and is computed by the share price over the earnings per share. The market-to-book ratio evaluates a company's current market value to its book value and is computed by market cap/book value.

Author's Note

This paper is a modification of the original research paper to summarize the findings for a general audience. For a more complete and technical analysis of the results, please contact the author. His email is
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Conclusion

Apple and Microsoft are both financially stable companies in the industry, but both have their particular strengths and weaknesses. A weakness Microsoft faces in its asset management ratios is holding their inventory almost three times as long as Apple. Further, the days' in sales in receivables is also higher for Microsoft. In the short-term solvency ratios, Apple faces trouble. Microsoft has more currents assets on hand and lower current liabilities, plus Microsoft is less volatile. A strength Apple has in this department is higher total assets compared to Microsoft. Apple and Microsoft are very similar in their long-term solvency ratios because of similar total debt, debt-equity, equity multiplier, and long-term debt ratios. This means they are both performing well when compared to one another. The biggest difference is the times interest earned ratio because Microsoft has a bigger ratio. Both firms experienced sharp increases in their stock prices over the five-year period (2015-2019). Apple's stock price doubled between 2015 and 2019, while Microsoft saw a three-fold increase. Both firms are expected to become more financially secure and continue to grow in the future.

References

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