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FINANCIAL ANALYSIS OF MICROSOFT CORPORATION

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ABSTRACT

Microsoft Corporation *is an American multinational technology company having headquarters in Redmond, Washington, that develops, manufactures, licenses, supports and sells computer software, consumer electronics and personal computers and services. In this paper, a financial analysis of the Microsoft Corporation is conducted based on the publicly available financial data for the last five years. Financial ratios are relationships between the different elements of* ***financial statements.*** *We conclude that MSFT has enjoyed higher profitability in previous years and rates of return have been declining. Even though MSFT profits are higher today in $ amount, their profitability margins are lower. Since profitability is one (but not the only one) driver of stock returns, it is important that shareholders understand the potential impact of future profitability. Liquidity ratio deteriorated over the years and degree of financial leverage has remained roughly flat.*

Keywords: Microsoft Corporation, Financial analysis, liquidity ratio, profitability ratio, financial leverage.

Introduction

Microsoft Corporation is an American multinational technology company having headquarters in Redmond, Washington, that develops, manufactures, licenses, supports and sells computer software, consumer electronics and personal computers and services. Its best known software products are the Microsoft Windows line of operating systems, Microsoft Office office suite, and Internet Explorer and Edge web browsers. It is the world's largest software maker measured by revenues. Microsoft was founded by Paul Allen and Bill Gates on April 4, 1975, to develop and sell BASIC interpreters for Altair 8800. It rose to dominate the personal computer operating system market with MS-DOS in the mid-1980s, followed by Microsoft Windows. The company's 1986 initial public offering, and subsequent rise in its share price, created three billionaires and an estimated 12,000 millionaires among Microsoft employees. Since the 1990s, it has increasingly diversified from the operating system market and has made a number of corporate acquisitions.

This article emphasize on Financial Ratios of Microsoft Corporation and goes through the analysis of such ratios and its effect on investors wealth. **Financial ratio analysis** highlights the strengths and weaknesses of a company. **Financial analysis** is the selection, evaluation, and interpretation of financial data, along with other relevant information, to assist in investment and financial decision-making. Financial ratios are relationships between the different elements of **financial statements.**

In this article we will evaluate the three broad head of financial ratios of Microsoft Corporation [MSFT] namely:

I. Liquidity ratios

II. Profitability ratios

  a) Return on sales

  b) Return on investments

III. Leverage ratios

I) Liquidity Ratios

Liquidity ratios measure the company's ability to meet its short-term obligations. The most common liquidity ratios are

- Current Ratio: A liquidity ratio calculated as current assets divided by current liabilities.

  Current ratio = (Current Assets / Current Liabilities)

- Quick Ratio: A liquidity ratio calculated as (cash plus short-term marketable investments plus receivables) divided by current liabilities.

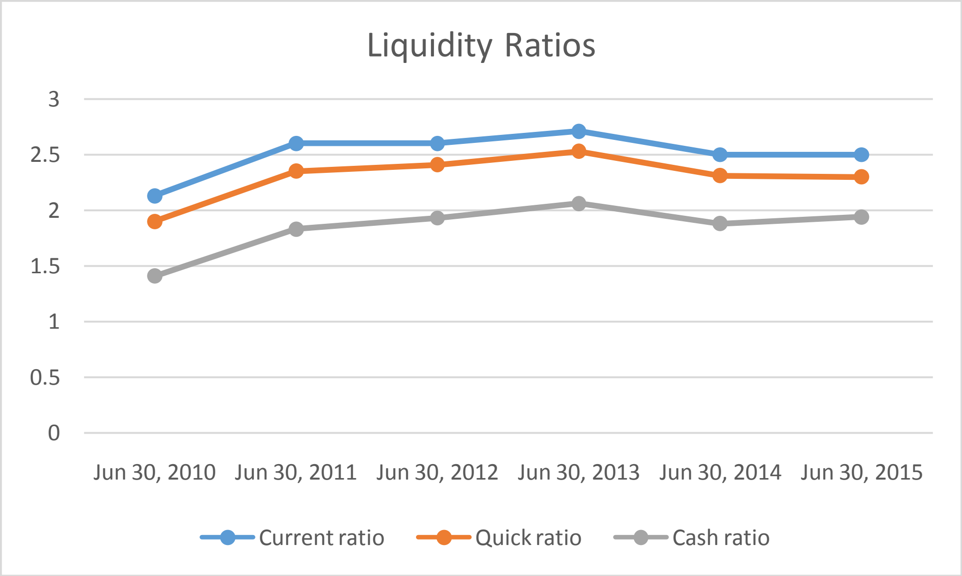
  Quick ratio = (cash plus short-term marketable investments plus receivables / Current Liabilities)

- Cash Ratio: A liquidity ratio calculated as (cash plus short-term marketable investments) divided by current liabilities.

  Cash ratio = (cash plus short-term marketable investments / Current Liabilities)

Generally, the larger these liquidity ratios, the better the ability of the company to satisfy its immediate obligations. Consider the current ratio. A large amount of current assets relative to current liabilities provides assurance that the company will be able to satisfy its immediate Obligations. However, if there are more current assets than the company needs to provide this assurance, the company may be investing too heavily in these non- or low-earning assets and therefore not putting the assets to the most productive use.

Liquidity Ratios of Microsoft Corporation						
Ratios	**Jun 30, 2010**	**Jun 30, 2011**	**Jun 30, 2012**	**Jun 30, 2013**	**Jun 30, 2014**	**Jun 30, 2015**
Current ratio	2.13	2.6	2.6	2.71	2.5	2.5
Quick ratio	1.9	2.35	2.41	2.53	2.31	2.3
Cash ratio	1.41	1.83	1.93	2.06	1.88	1.94
Source: http://financials.morningstar.com/ratios/r.html?t=MSFT						



Interpretation:

As evident from the graph above we can draw following conclusions:

- Microsoft Corp.'s current ratio increased consecutively from 2010 to 2013 whereas it deteriorated from 2013 to 2014 and from 2014 to 2015.
- Microsoft Corp.'s quick ratio improved successively from 2010 to 2013 whereas declined from 2013 to 2014 and from 2014 to 2015.
- Microsoft Corp.'s cash ratio increased from 2010 to 2013 but it deteriorated from 2013 to 2014 but then slightly improved from 2014 to 2015.

Reasons:

1. The trend lines of liquidity ratios increased sharply in the graph above in fiscal year 2011 compared with fiscal year 2010. This is due to increased revenue and cash collections from customers. Increase in proceeds from issuance of debt is another reason contributing to rise in liquidity ratios.

2. Liquidity ratio trend lines remained flat or risen slightly from year 2011 to 2012 and from year 2012 to 2013. The main reason backing the increase in ratios at diminishing rate is increased revenue and cash collections from customers is offset by the repayment of debt and payment of dividend. Moreover, current assets were consumed in acquisition of assets (both tangible and intangible). Company also spent significant amount on research and development activities.

3. Liquidity ratios deteriorated from 2013 to 2014 and from 2014 to 2015 which is shown in the graph by downward moving trend lines. The main cause of downtrend is share repurchase program carried out by Microsoft Corporation in 2014 and 2015. All repurchases were made using cash resources which led to decrease in working capital and thereby lower liquidity ratios.

II) Profitability ratios

This section discusses the different measures of corporate performance and financial profitability. These ratios give users a good understanding of how well the company utilized its resources in generating profit and maximising shareholder value.

a) **Return on sales**: The return-on-sales ratio measures how much of company's revenue results in profit rather than going toward paying your company's costs. A higher ratio means company is able to earn higher profit. For example, a return-on-sales ratio of 30 percent means company is able to generate 30 cents of profit per dollar of sales.

i) **Gross Profit Ratio**: Gross profit ratio (GP ratio) is a profitability ratio that express the relationship between gross profit and net sales revenue.

Gross profit ratio = (Gross profit / Net sales) × 100

ii) **Operating Profit Ratio**: The operating profit ratio (also known as the operating profit margin) is a profitability ratio that is measured by dividing the operating net profit by sales revenue. This ratio concludes about the ability of the management in running the business efficiently.

Operating profit ratio = (Operating profit / Net sales) × 100

iii) **Net Profit Ratio**: Net profit ratio (NP ratio) is a profitability ratio that shows the relationship between net profit and net sales revenue.

Net profit ratio = (Net profit / Net sales) × 100

(b) **Return on investments (ROI)**: A profitability measure that evaluates the performance of a business by comparing net profit with net worth. To calculate ROI, net profit is divided by the capital employed, and the result is expressed as a percentage or a ratio.

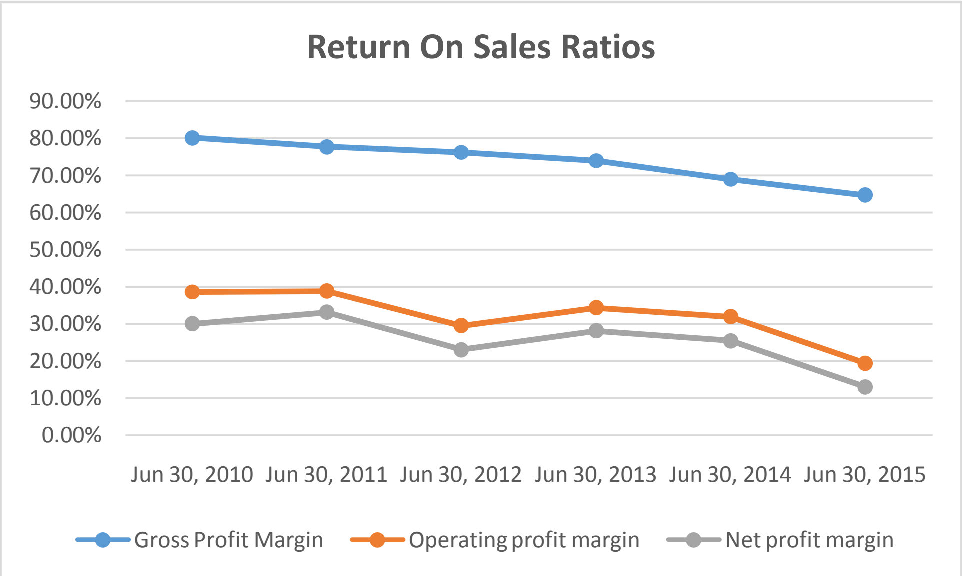
i) **Return on Equity (ROE)**: Return on equity (ROE) is a ratio that provides investors understanding of how well a company is managing the resources that equity shareholders have contributed to the company.

Return on Equity = (Net Income/Shareholder's Equity) x 100

ii) **Return on Assets (ROA)**: The return on assets ratio or ROA is calculated to check how efficiently a company can utilise its assets to produce profits during a period.

Return on Assets = (Net Income/Average total Assets) x 100

Return On Sales Ratios of Microsoft Corporation						
RATIOS	**Jun 30, 2010**	**Jun 30, 2011**	**Jun 30, 2012**	**Jun 30, 2013**	**Jun 30, 2014**	**Jun 30, 2015**
Gross Profit Margin	80.16%	77.73%	76.22%	73.99%	68.98%	64.70%
Operating profit margin	38.57%	38.83%	29.52%	34.38%	31.97%	19.41%
Net profit margin	30.02%	33.10%	23.03%	28.08%	25.42%	13.03%
Source: http://financials.morningstar.com/ratios/r.html?t=MSFT						



Interpretation:

- The trend in gross profit margin as depicted in above graph has been downwards from year 2010 to 2015.

- Microsoft Corp.'s operating profit margin and net profit margin deteriorated from 2010 to 2015 with a small rise in year2013. This is shown by downward trend line with a slight rise in the year 2013.

Reasons:

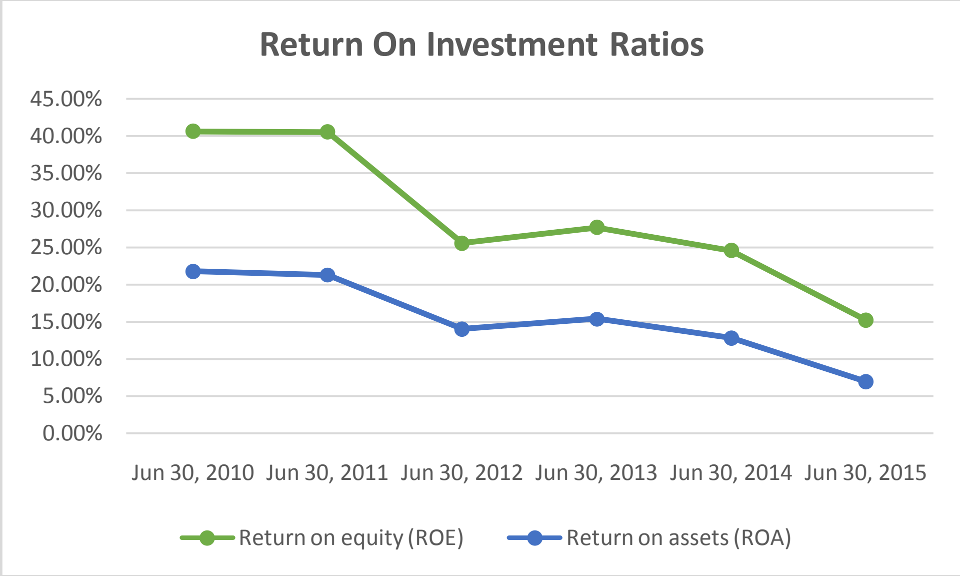
Gross Margin

The trend line representing gross margin has been downwards. As shown by graph above gross margin has declined steadily from 80.16% in 2010 to 64.7% in 2015 which is due to higher costs of revenues. Despite revenues growing at an average rate of 7.5%, the costs to generate revenues have grown at an average rate of 20.3%.Despite increases in cost of revenue, MSFT enjoys a healthy gross margin and solid revenue growth.

Operating profit Margin & Net Profit Margin

Operating margin and net profit margin trend line deteriorated from 2010 to 2015. This fall is attributed to changes in cost of revenue as research and development (R&D) and selling, general and administrative (SG&A), and marketing. These costs have been consistently increasing as revenues increase, but it has remained constant as % of revenue. If the goodwill impairment of 2012 is eliminated, operating margin would have been roughly 38% for that year.

Return On Investment Ratios of Microsoft Corporation						
RATIOS	**Jun 30, 2010**	**Jun 30, 2011**	**Jun 30, 2012**	**Jun 30, 2013**	**Jun 30, 2014**	**Jun 30, 2015**
Return on assets (ROA)	21.79%	21.30%	14.00%	15.35%	12.81%	6.92%
Return on equity (ROE)	40.63%	40.55%	25.58%	27.69%	24.59%	15.23%
Source: http://financials.morningstar.com/ratios/r.html?t=MSFT						



Interpretation:

We can observe the long-term picture of the stock by looking at Microsoft Corporation's profitability in the past 5 years as portrayed by above graph. MSFT has shown a downward trend in profitability metrics from year 2010 to year 2015.

Reasons:

Two significant ratios to analyse trend are Return on Equity (ROE) and Return on Assets (ROA). In this article, we will analyse of both measures of profitability. Both ROA and ROE are disintegrated into more ratios to analyse the falling trend in above metrics, this is known as DuPont analysis.

- **Return on Assets**

To analyse ROA, the ratio is decomposed into asset turnover ratio and net profit ratio. The product of asset turnover ratio and profit margin is equal to ROA.

Return on Assets = Asset turnover ratio x Net Profit margin ratio

<u>Asset Turnover Ratio:</u>

Asset turnover measures how well a company uses its assets to generate sales revenue. The ratio of asset turnover has decreased from 0.72 in 2011 to 0.55 in 2015. Despite the fact that total revenues have been growing gradually from 2011 to 2015, the average asset base has been growing at a faster rate. Consequently the turnover of assets has decreased.

MSFT's revenues increased from $69.9 billion in 2011 to $86.8 billion in 2014. However, the average asset base increased from $97.4 billion to $157.4 billion. This indicates that MSFT hasn't been able to create sales from their asset base at the same rate as in previous years.

Profit Margin for ROA:

The highest profit margin reported was 33.1% in 2011 which can be seen in net profit margin data table. Since then, profit margin has declined to 13.03% from 2011 to 2015.In 2012, impairment of goodwill was the major reason that net income decreased significantly. Following 2012, net income has increased year over year. Regardless of the increases in net income, profit margin reduced from 2011 to 2015.

Total revenues have been progressively growing at an average rate of 7.5% from 2011 to 2015.One reason for falling profit margin from the levels of 2011 is due to higher cost of revenues as percentage of revenues. Microsoft has increased its cost of revenues from 20% of revenue in 2011 to 31% in 2014.

To sum up, the ROA has fallen from 21% in 2010 to 6% in 2015 as shown by ROA trend line, which is due to decreasing profit margin and asset turnover. This falling trend means that MSFT has not been able to use its assets as efficiently as it has been in previous years. Despite of rise in revenue, MSFT has increased its costs to earn these revenues. Despite growing net income from 2011, the average asset base has grown at a faster pace. This results in the total return on assets to drop. Decreases in return on assets sends a negative signal to investors.

- **Return on Equity**

The ROE determines the profitability of an organisation as percentage of the common equity. It denotes an important tool for profitability measurement and for calculating benchmark required rate of return on equity capital. ROE highly driven by the amount of leverage that a company takes, profit margin and asset turnover. Therefore, to analyse falling trend in ROE of Microsoft we decompose ROE into these three ratios.

The multiplicative result of profit margin, asset turnover and financial leverage is equal to ROE.

Return on Equity = Asset turnover ratio x Net Profit ratio x financial leverage

Profit Margin for ROE

The decrease in profit margin is due to higher costs of revenue and one-time goodwill impairment. MSFT booked goodwill impairment of $6.2 billion in its OSD unit in 2012, which operates in the consumer devices segment. Moreover, MSFT uses little debt financing and this makes their interest expense trivial to make a substantial difference in the calculation of profit margins.

Profit margin was highest in 2011. Subsequently, profit margin deteriorated from years 2012 to 2015 which is shown in the Net Profit Margin chart.

Asset Turnover

Asset turnover decreased, despite increases in the revenue. This is due to expansion in the asset base. As mentioned in the ROA section, from 2011 to 2014 asset turnover decreased. Apart from the goodwill impairment in 2012, there have not been other asset impairments.

Financial Leverage

Financial leverage remained roughly unchanged because asset base expansion was directly tied to increase in shareholders' equity. Moreover, convertible bonds worth $1.25 billion were converted into common stock during 2013.

Putting it all together: Return on Equity

The graph clearly shows ROE was the highest in 2010 at 40.63%. Consequently, it dropped to 25.58% in 2012 and was maintained around same level without huge fluctuations. In 2015, ROE was 15.23%.

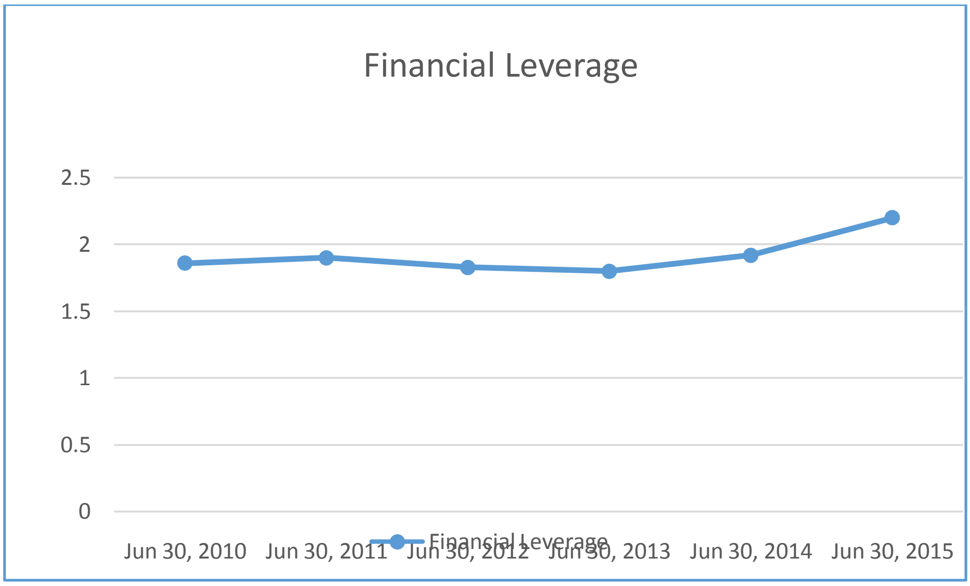
The main reasons that can be concluded for deteriorating ROE are fall in profit margin and asset turnover, while financial leverage had a very little effect.

III) Financial Leverage

Financial leverage can be aptly described as the degree to which a company's capital structure is funded by fixed-income securities such as debt and preferred equity. The more debt financing a company uses, the higher its financial leverage. More leverage means risk for stockholders.

Degree of Financial Leverage = Percentage change in EPS / Percentage change in EBIT

Financial leverage ratio of Microsoft Corporation						
RATIOS	**Jun 30, 2010**	**Jun 30, 2011**	**Jun 30, 2012**	**Jun 30, 2013**	**Jun 30, 2014**	**Jun 30, 2015**
Financial Leverage	1.86	1.9	1.83	1.8	1.92	2.2
Source: http://financials.morningstar.com/ratios/r.html?t=MSFT						



Interpretation: Above graph displays that the degree of financial leverage has remained roughly flat, during the period from 2011 to 2014. The ratio fluctuated little from 1.89 in 2011 to 1.87 in 2014 whereas till there is a steep increase in year 2015.

Reasons: This flat trend line indicates that most of the assets of Microsoft are financed by equity capital, and not debt. This type of financing causes less risk for stockholders, as most of the asset claims are owned by shareholders and not bondholders.

Conclusion:

In this paper, a financial analysis of the Microsoft Corporation is conducted based on the publicly available financial data for the last five years. We conclude that MSFT has enjoyed higher profitability in previous years and rates of return have been declining. Even though

MSFT profits are higher today in $ amount, their profitability margins are lower. Since profitability is one (but not the only one) driver of stock returns, it is important that shareholders understand the potential impact of future profitability. Liquidity ratio deteriorated over the years and degree of financial leverage has remained roughly flat. Microsoft is ranked number one in term of sales and its net income is the highest. The future financial growth seems to be strong. Microsoft is subject to fierce competition not only from its arch commercial rivals such as IBM, Oracle, Sun Microsystems, but also from non-commercial software developers. These companies are developing open source software at nominal cost and earn their revenue by providing software customization or service support. Microsoft is using its intellectual capital as a competitive advantage to respond to these threats.

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