“Research Report”

A Study of Market Research Analysis of Microsoft Corporation

Leveraging SWOT, trend, and gap analyses of secondary data, this report assesses Microsoft’s strategic position and pinpoints key growth opportunities.

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1.Executive Summary

This report presents a comprehensive Market Research analysis of Microsoft Corporation using various data analysis techniques

Microsoft, a global leader in technology and software services, has shown remarkable financial growth and stability over the years. This analysis covers a detailed examination of Microsoft's financial statements, key financial ratios, and comparative performance within the industry.

The study employs data analysis techniques such as

- Ratio analysis
- Statement Analysis
- Trend analysis
- Comparative analysis
- SWOT Analysis

Through tools like Excel and SQL (Structure query language) to provide a thorough understanding of the company's financial position.

And also visualize data using visualization tools such as

- Excel
- Tableau
- Power BI

2.Introduction

Financial performance analysis is a crucial aspect of evaluating a company's health and sustainability in the market. It involves a thorough examination of financial statements and the application of various analytical tools to gain insights into the company's financial status, operational efficiency, and overall performance. This study focuses on Microsoft Corporation, one of the leading technology companies globally, renowned for its innovation and diverse product portfolio.

Scope: This study covers a detailed financial analysis of Microsoft Corporation over recent fiscal years. It examines key financial statements, including the income statement, balance sheet, and cash flow statement, to assess the company's profitability, liquidity, solvency, and efficiency. The analysis also includes a comparison with industry benchmarks and key competitors to provide a comprehensive view of Microsoft's market position.

Significance: Analyzing Microsoft's financial performance is essential for several reasons. For investors, it provides critical insights into the company's profitability and potential return on investment. For management, it highlights areas of strength and opportunities for improvement. For stakeholders, such as employees apartners, it offers a clear picture of the company's financial health and future prospects. Furthermore, this analysis helps understand the broader economic impact of Microsoft's operations and strategic decisions.

3.Objective Of Study

The primary objective of this study is to conduct a comprehensive financial performance analysis of Microsoft Corporation using various data analysis techniques. This analysis aims to provide a clear understanding of Microsoft's financial health, operational efficiency, and market position. The specific objectives of the study are as follows:

- **Evaluate Financial Health:**
  - To assess Microsoft's overall financial stability by analyzing its financial statements, including the income statement, balance sheet, and cash flow statement. ○ To determine key financial metrics such as revenue growth, profitability, and return on investment.

- **Analyze Liquidity and Solvency:**
  - To evaluate Microsoft's ability to meet its short-term obligations by analyzing liquidity ratios.
  - To assess the company’s long-term financial stability and risk of insolvency through solvency ratios.

- **Examine Operational Efficiency:**
  - To analyze the efficiency of Microsoft’s operations by examining asset turnover ratios, inventory turnover ratios, and other relevant metrics. ○ To identify trends and patterns in Microsoft's operational performance over recent fiscal years.

- **Compare Industry Benchmarks:**

- To compare Microsoft's financial performance with key competitors and industry benchmarks to determine its market position. ○ To identify strengths, weaknesses, opportunities, and threats (SWOT analysis) in relation to its competitors.

- **Provide Actionable Insights:**
  - To offer actionable recommendations based on the findings of the financial analysis to support Microsoft's strategic decision-making.
  - To suggest areas for improvement and potential strategies for enhancing financial performance.

- **Support Stakeholder Decision-Making:**
  - To provide valuable insights to investors, management, and other stakeholders to aid in informed decision-making. ○ To highlight the implications of Microsoft's financial performance on its future growth and sustainability.

By achieving these objectives, the study aims to provide a thorough and insightful analysis of Microsoft's financial performance, contributing to a deeper understanding of its current state and future prospects.

4.Company Profile

Microsoft Corporation, founded in 1975 by Bill Gates and Paul Allen, has evolved from a small software vendor to a multinational technology giant. With products ranging from operating systems and productivity software to cloud services and gaming, Microsoft has a significant impact on the technology industry and the global economy. As the company continues to grow and diversify, understanding its financial performance becomes increasingly important for investors, stakeholders, and analysts.

Company Stats

- **Employer Type**

Public

- **Size**

10,001+ Employees

- **Major Departments**

- Business Development and Strategy
- Business Programs and Operations
- Customer Success, Data Center
- Engineering
- Evangelism
- Finance
- Hardware Engineering
- Hardware Manufacturing Engineering
- Human Resources
- IT Operations
- Corporate
- External and Legal Affairs, Marketing
- Research
- Retail

- Sales Services
- Supply Chain and Operations Management
- Technical Sales

- **Major Brands**

Windows • Xbox, Windows Phones • Skype • Yammer • Outlook • Surface (line of tablets) • Office • GitHub • Microsoft Azure (global cloud computing platform) • Visual Studio (developer tools)

- **CEO**

Satya Nadella

- **Affiliated Companies**

- LinkedIn
- Xbox Game Studios

About the Company

Microsoft is a global tech giant. The company has been creating inspired innovations and chasing a futuristic vision since its founding in 1975. All these years later, Microsoft has yet to slow down. At its core, the company is built on creativity and invention. Its enterprising attitude has lead it to make smart acquisitions and grow its suite of products and capabilities. In 2021, Microsoft acquired The Marsden Group, a tech company specializing in industrial environments. Other important acquisitions have been Hotmail in 1997, Skype in 2011, and nearly 10 acquisitions in 2020 alone. Unlike other tech companies with one signature product or idea, Microsoft operates under the pretense that there's always more to discover, more to create, and more to do to make the world a better place.

Microsoft's innovations and products are known worldwide. They garner attention, millions of users, and industry praise, but there is so much work that goes on behind the scenes, innovations that have made it possible for Microsoft to achieve powerhouse status. For example, Microsoft is "the first cloud provider that is running two-phase immersion cooling in a production environment," a feat that allows Microsoft software to run on numerous computers without worry of overheating. Engineer Christian Belady says, "Air cooling is not enough, that's what's driving us to immersion cooling, where we can directly boil off the surfaces of the chip." Innovations like this are a daily occurrence at Microsoft. Its massive achievements in computer engineering is what's made it successful.

The company's path has been paved by a hardworking, focused team of professionals around the world who all share one thing: a growth mindset. At Microsoft, a growth mindset is integral to the continued progress and evolution of the company and its products. "It starts with a belief that everyone can grow and develop," says Microsoft, "that potential is nurtured, not predetermined; and that anyone can change their mindset." Curiosity, passion, and drive set Microsoft apart as a global institution of invention and progress.

5.Conceptual Background

The conceptual background section provides an understanding of the fundamental concepts and theories underpinning the financial performance analysis. This includes definitions, key metrics, and data analysis techniques that will be used in the study.

1. **Financial Performance Analysis:** Financial performance analysis is the process of evaluating a company's financial statements to understand its financial health, operational efficiency, and market position. It involves scrutinizing the income statement, balance sheet, and cash flow statement, along with applying various financial ratios and metrics to derive meaningful insights.

2. **Key Financial Statements:**

   - **Income Statement:** This statement shows the company's revenues, expenses, and profits over a specific period. It helps in assessing profitability and operational performance.
   - **Balance Sheet:** This provides a snapshot of the company's financial position at a given point in time, detailing assets, liabilities, and shareholders' equity. It helps in evaluating liquidity and solvency.
   - **Cash Flow Statement:** This statement outlines the company's cash inflows and outflows from operating, investing, and financing activities. It is crucial for assessing liquidity and cash management.

3. **Key Financial Metrics:**

   - **Revenue:** Total income generated from the sale of goods and services.
   - **Profitability Ratios:** Measures such as net profit margin, gross profit margin, and return on equity (ROE) that assess the company's ability to generate profits.
   - **Liquidity Ratios:** Metrics like current ratio and quick ratio that evaluate the company's ability to meet short-term obligations.
   - **Solvency Ratios:** Ratios such as debt-to-equity and interest coverage ratio that assess long-term financial stability and risk of insolvency.

- **Efficiency Ratios:** Measures like asset turnover ratio and inventory turnover ratio that evaluate how effectively the company utilizes its assets.

4.Data Analysis Techniques:

- **Financial Statements Analysis:** Analyze Microsoft's income statement, balance sheet, and cash flow statement.
- **Ratio Analysis:** This involves calculating and interpreting various financial ratios to assess different aspects of the company's performance, such as profitability, liquidity, and solvency.
- **Trend Analysis:** This technique examines financial data over a period to identify patterns and trends. It helps in understanding the company's performance trajectory.
- **Comparative Analysis:** This involves comparing the company's financial metrics with industry benchmarks and key competitors to gauge relative performance.
- **SWOT Analysis:** A strategic planning tool used to identify strengths, weaknesses, opportunities, and threats related to business competition or project planning.
- **Data Visualizations:** Use charts and graphs to illustrate key findings

5. Importance of Financial Performance Analysis:

- **Informed Decision-Making:** Provides insights to management, investors, and stakeholders for making informed decisions.
- **Performance Evaluation:** Helps in evaluating the company's past and present performance to make strategic adjustments.
- **Risk Management:** Identifies financial risks and areas requiring improvement to mitigate potential issues.
- **Strategic Planning:** Aids in long-term planning and setting financial goals based on performance insights.

Understanding these concepts and applying appropriate data analysis techniques is essential for conducting a thorough financial performance analysis of Microsoft Corporation. The insights gained from this analysis will help in evaluating the company's financial health, identifying growth opportunities, and making strategic decisions.

6.Research Methodology

The research methodology outlines the systematic approach used to conduct the financial performance analysis of Microsoft Corporation. This section describes the

- Research design,
- Data collection methods,
- Analytical tools, and techniques employed in the study.

• Research Design:

The study adopts a quantitative research design to analyze Microsoft's financial performance. The design involves the collection and analysis of numerical data from the company's financial statements, financial ratios and other relevant sources. This approach enables a detailed examination of financial metrics and trends.

• Financial Ratio Analysis Method of Microsoft Corporation

Financial ratio analysis is a powerful tool for evaluating a company's financial health and performance. This section provides an in-depth analysis of key financial ratios for Microsoft Corporation, categorized into profitability, liquidity, solvency, and efficiency ratios.

Liquidity ratios

A liquidity ratio measures whether a debtor will be able to meet their payment obligations with readily available cash or if they will need to raise additional capital to cover the amount (Saleem et al, 2011). This type of metric can also demonstrate how quickly the debtor's assets can be converted into cash to settle the debt. Creditors (and sometimes debtors) use liquidity ratios to determine whether a company can repay creditors with the total cash on hand. The greater a company's liquidity ratio, the more liquid their assets and the greater their ability to pay off short-term debts. It is quite crucial to maintain an adequate level of liquidity within the company (Eljelly, 2004). The liquidity management can be considered the company's backbone. Without maintaining a sufficient level of liquidity within

the organization, managers cannot predict the future. If a company cannot generate a profit, it is sick (Madushanka, 2018). But if the company lacks liquidity, it will decline and eventually perish.

Consequently, liquidity is a prerequisite for determining the company's survival (Niresh, 2012).

Similarly, to the importance of the quantity of liquid assets, the importance of quality cannot be overstated. This ratio considers only a company's current assets. To analyze a company's liquid strength, it is thus prudent to consider additional accounting metrics in addition to the liquidity ratio. Inventory is utilized to calculate a company's liquidity via the liquidity ratio. This can, however, result in a miscalculation due to overestimation. Higher inventory levels may also contribute to decreased sales. Consequently, inventory calculation may not reflect a company's true liquidity. This ratio may also be the result of creative accounting, as it only includes information from the balance sheet. To comprehend the financial position of a company, analysts must perform liquidity ratio analysis in addition to examining the balance sheet.

We will be using two different types of liquidity ratios, current and cash ratios, to analyze the liquidity of Microsoft and find if they are able to meet its liabilities. The current ratio is a liquidity ratio that measures a company's ability to pay its short-term or annual obligations (Nuryani et al, 2020). It explains to investors and analysts how a company can maximize its current assets to pay its current debt and other payables (Welc, 2022).

The higher the current ratio, the better for a creditor, especially a short-term creditor like a supplier. A high current ratio for the company shows liquidity, but it may also mean that cash and other short-term assets are being used inefficiently. A current ratio of less than 1 would indicate that net working capital (current assets fewer current liabilities), which is what we would anticipate observing absent any special circumstances, is negative. In a healthy company, at least for most business kinds, this would be unusual (Ross et al, 2016). According to (Wardana, 2015), based on his ratio calculation, a company with a low current ratio indicates that its current assets are insufficient to cover its short term liabilities. In contrast, a company with a high current ratio is not necessarily deemed to be successful, as a

high current ratio may result from ineffective cash and inventory management. Therefore, a standard ratio, such as the ratio standard of comparable business segments, is required to determine whether a company has a good level of liquidity.

In addition to the above-mentioned lack of specificity, a further disadvantage of using the current ratio is its lack of specificity. In contrast to many other liquidity ratios, it includes all a company's current assets, including those that are difficult to liquidate (Husna et al, 2019). To calculate the ratio, analysts compare the current assets and liabilities of a company (Ross et al, 2016).

$$Current\ ratio = \frac{current\ assets}{current\ liabilities}$$

The cash ratio measures the liquidity of a company. Short-term creditors are extremely interested in this ratio, per (Ross et al, 2016). The cash ratio is calculated by dividing cash and its equivalents by short-term obligations. The cash ratio is used to gauge how much cash is accessible (AFFANDI et al, 2019). This is important for the creditors so they know the company will be able to pay its debt. Cash ratios can sometimes project a different perspective than more traditional ratios, so it is essential to analyze cash ratios for investigating of the financial statements of the company (Kirkham, 2012). Cash ratios is usually more or less than one, where one indication perfect metric that explains the company has exactly amount of cash and its equivalents compared to its liabilities.

$$Cash\ ratio = \frac{cash\ +\ cash\ equivalents}{current\ liabilities}$$

Financial leverage/solvency ratios

Long-term solvency ratios are used to measure a company's overall financial leverage as well as its capacity to meet obligations in the long run. Sometimes referred to as financial leverage ratios or simply leverage ratios (Ross et al, 2016). Normally companies will use a financing mix of debt and equity for their operations so its important to know how much of that is financed by debt to evaluate if the company is able to pay it. An excessive amount of debt might be risky for a company but, if a company's operations can generate a higher rate of return than the interest rate on its loans, the debt may help the company grow (Pandey, 2007).

Several ratios can be classified as leverage ratios, but debt, equity, assets, and interest expenses are the most vital. A leverage ratio could also be used to figure out how different changes in a company's operating expenses will affect its operating income (Hull, 1999). There are two kinds of operating costs: fixed costs and variable costs. The proportion of each varies from business to business and industry to industry. The consumer leverage ratio is used in economic analysis and by policymakers to figure out how much debt consumers have compared to how much money they have available. We will look at the company using the debt-toequity (D/E) ratio and the net debt-to-EBITDA (earnings before interest, taxes, depreciation, and amortization) ratio.

The debt-to-equity ratio is the ratio of a company's debt to its shareholders' equity. A company's financial leverage is measured by its debt-to-equity ratio, which can shed light on both the company's ability to pay off loans and its overall level of risk. Debt is problematic for businesses because interest payments must be made even if there is insufficient revenue to cover them. They noted that due to the significance of the risk-return relationship, many experts believe the debt-to-equity ratio to be an essential statistic for analyzing the performance of each company (Libby et al, 2009). Debt must be repaid or refinanced; it typically incurs interest expense that cannot be deferred and, in the event of a default, could diminish or destroy the value of equity. Consequently, a high D/E ratio is frequently associated with a high level of investment risk; it indicates that a company relies heavily on debt financing (Peterson et al, 1999). If the incremental profit increase exceeds the related increase in debt service costs, then shareholders should expect to benefit from debt-financed expansion (Heikal, 2014). However, the share price may decline if the additional cost of debt financing exceeds the additional income it generates. Depending on market conditions, the cost of debt and a company's

ability to service it can vary. Consequently, borrowing that initially appeared prudent may prove unprofitable under different circumstances (Hull, 1999).

Investors can use different ratios to judge a company's short-term leverage and its ability to pay debts that are due in less than a year (Collin et al, 2001). It is also crucial to consider the company's industry when calculating the D/E ratio. For ideal analysis the ratios should only be compared within the same industry, as some industries use high debt to finance their operation than others. As a highly regulated industry that usually makes big investments with a stable return rate and a steady stream of income, utilities borrow a lot and don't have to pay much for it. High leverage ratios are an effective use of capital in sectors with slow growth and steady income. For similar reasons, companies in the consumer staples sector typically have high D/E ratios (CSI, 2022).

$$Debt\ to\ Equity = \frac{Total\ debt}{Total\ equity} \quad (3)$$

The net debt-to-EBITDA ratio is a financial ratio that measures a company's ability to pay off its debts using its earnings before interest, taxes, depreciation, and amortization (Pecha et al, 2015). Analysts prefer net debt to EBITDA and net debt to equity as benchmarks for debt management (Pecha et al, 2015). Generally, a low net debt to EBITDA ratio is desired, as it indicates that a company is not overburdened by debt and will be able to meet its financial obligations without difficulty. A high net debt to EBITDA ratio, on the other hand, means that a company has too much debt, which also means that its credit rating is bad, and investors will probably want higher bond yields to make up for the higher risk of lending money to the company (Samonas, 2015).

A high net debt-to-EBITDA ratio could also mean that a business is more indebted than it is profitable, which could increase its financial risk and make it more susceptible to market downturns or other difficulties. A firm's cash flow may be under strain, which will make it more challenging for the company to pay off its debts, if the net debt-to-EBITDA ratio is high. Moreover, high net debt-toEBITDA

ratio may also be an indication of impending financial trouble or insolvency. A corporation may not be able to meet its financial obligations and run the risk of default or bankruptcy if its earnings are insufficient to pay off its debt. This could have detrimental effects on the business's reputation and financial standing, as well as its owners, creditors, and stockholders.

$$Net\ Debt\ to\ EBITDA = \frac{Total\ Debt - Cash\ \&\ equivalents}{EBITDA}$$

where

$$EBITDA = Earnings\ before\ interest, taxes, depreciation\ and\ amortization$$

(4)

Profitability ratios

Profitability ratios are a class of financial ratios that measure a company's ability to generate profits and return on investment. These ratios are used to assess a company's financial performance and efficiency, and they can provide insights into the company's profitability and potential for growth. These ratios focus on evaluating on how efficient firms are in utilizing its assets and manage its operations (Ross et al, 2016). Profitability is a metric for detecting profit and a criterion for assessing the results of a company's activities over a specific period (Husain et al, 2020). Higher profitability ratios are typically thought to be preferable from a financial standpoint. This is true because profitability ratios quantify an organization's capacity to produce profits and a return on investment, and a larger ratio denotes an organization's increased effectiveness and efficiency in generating such outcomes.

The gross profit margin is a profitability ratio that measures the percentage of revenue that a company retains after accounting for the cost of goods sold or simply put shows the rate of return on gross profit to net sales (Naris Wari et al, 2020). According to (Brigham, E. F., & Houston, 2011), gross profit margin is the proportion of the sale remaining after the company has paid for its goods. Therefore, if a company has a high GPM (gross profit margin), it may be advantageous, as the lower the relative cost of selling goods, the higher the GPM. Normally a fluctuating gross profit margin is not good for a company and reflects poor management of its operations. This fluctuation can be justified if a company is investing to improve their supply chain that might give higher returns compared to the initial investment.

Gross profit margin is not always a good way to compare industries because cost structures and how profits are calculated vary from one to the next. This is due to the disregard of other facts like production costs increase from suppliers or reducing product price initially to grow the market share which can result false profit figures. So, a careful and precise evaluation of this ratio, can helps tech companies cut costs by calculating if their gross profit margin is too low, which indicates that they either must cut costs or increase their prices to maintain a stable percentage of profit.

$$Gross\ Profit\ Margin = \frac{Net\ Sales - COGS}{Net\ Sales}$$

h were

COGS = cost of goods sold

The return on assets (ROA) is a profitability ratio that measures the percentage of profit that a company generates for each dollar of assets it holds. It measures the company's ability to generate profits that can guarantee the firm value (Husna et al, 2019). Return on assets (ROA) is one of the most well-known and valuable financial ratios (Jewell, 2011). Higher return on assets is a good sign for the company as it indicates that the company can generate higher profits for its equivalent assets it holds. Analysts frequently use ROA to investigate the financial position, performance, and prospects of a company (Jewell, 2011). The ratios are

highly dependent on its corresponding industry, as different industries generate different returns on its assets. It is ideal to compare the ratios within in the same industry to get precise results as the margins will be similar within the same sector.

$$Return\ on\ Assets = \frac{Net\ Income}{Total\ Assets} \quad (6)$$

The return on equity (ROE) is a financial ratio that measures the percentage of profit that a company generates for each dollar of shareholder equity. The return on equity is considered a measure of a company's profitability and profitability generation efficiency. The greater the ROE, the more effectively a company's management generates income and growth from equity financing (Heikal, 2014). Return on equity considers only the equity portion of an investment. It relates the earnings remaining for equity investors after deducting debt service costs to the equity invested in the asset (Damodaran, 2007). ROE is a straightforward metric for assessing investment returns. By comparing a company's ROE to the industry average, the company's competitive advantage may be identified. ROE may also reveal how the company's management is utilizing equity-based financing for business expansion (Heikal, 2014). A sustainable and rising ROE over time may indicate that a company is adept at creating shareholder value because it knows how to reinvest its profits wisely to boost productivity and profits. A declining ROE, on the other hand, may indicate that management is making poor decisions regarding the reinvestment of capital in unproductive assets. A high ROI may not always be beneficial. A high ROE can signal a number of problems, such as inconsistent profits or excessive debt. In addition, a negative ROE due to a company's net loss or negative shareholders' equity cannot be used to analyze or compare the company, nor can it be compared to companies with positive ROE (Heikal, 2014).

$$Return\ on\ Equity = \frac{Net\ Income}{Average\ Shareholders'\ Equity}$$

Valuation ratios

Valuation ratios are a type of financial ratio that are used to evaluate the relative value or worth of a company's stock or other assets. Valuation ratios contextualize this knowledge within the context of a company's share price, where they serve as valuable tools for assessing investment potential. Valuation ratios have a unique significance when compared to other statistics that can be used to predict stock prices (Campbell et al, 2011). Valuation ratios are important for forecasting because they give a long series of data and show how stock prices are linked to careful assessments of a company's fundamental value (Campbell et al, 2011). The most used valuation ratios are the enterprise multiple (EV/EBITDA), price-toearnings (PE), and price-to-sales (P/S) ratio. Price-to-earnings ratio is one of the most used ratios to measure public companies. The PE ratio compares the price of a share to the shareholder profit per share. The direct comparison between cost and return provides the investor with an idea of the value of his or her investment. There are numerous variations of the PE ratio in which a company's adjusted earnings or diluted earnings are used to determine whether the cost and return are proportionate. It can be calculated for one year or multiple years.

The price to sales (P/S) ratio is a financial ratio that measures the valuation of a company's stock relative to its revenues. The P/S ratio is a crucial tool for investors and analysts in analysis and valuation. The ratio indicates the price per dollar of sales that investors are willing to pay. The P/S ratio is used to identify companies that are vulnerable to acquisition due to their low market valuation. The P/S ratio is calculated by dividing the sales of a company over a designated period (normally twelve months) by the total number of outstanding shares. Then, the market price of the stock is compared to its sales per share (Vruwink et al, 2007). Fisher's (1984) theory suggests that investors should only purchase stock in companies with low P/S ratios because each invested dollar will then purchase more dollars of sales, resulting in a greater likelihood of higher stock portfolio returns. The P/S ratio may not be a perfect indicator of a stock's popularity with investors because it does not focus on a company's earnings, which is the most

widely used metric for valuing companies in the modern financial press (Vruwink et al, 2007). It is believed that an investor seeking abnormally high returns over the long term would be best served by investing in highly profitable industries (Vruwink et al, 2007). Theoretically, if the P/S ratio could be adjusted for varying levels of profitability per dollar of sales, the resultant adjusted P/S ratio would be more consistent with modern investment strategy and more accurately reflect the popularity of a stock among investors (Vruwink et al, 2007).

$$Price - to - Sales\ (P/S)\ Ratio = \frac{Market\ Value\ per\ Share}{Sales\ per\ Share}$$

A price-to-earnings ratio, also known as a P/E ratio, is a financial ratio used to evaluate the value of a firm that measure its current share price relative to the company's earnings per share (Ghaeli, 2017). The ratio can be used to find the value of a company in the same sector to compare different companies. It can also be used to see how much company has improved their earnings as compared to its previous years. The ratio is very efficient and mostly preferred by investors and analysts to find the value of the company. By analyzing this ratio, we can see if the company's stock is undervalued or overvalued or properly valued. The price-toearnings ratio, like any other fundamental designed to inform investors as to whether a stock is worth buying, has a few limitations that are important to consider because investors are frequently led to believe that a single metric will provide complete insight into an investment decision, which is almost never the case (Ghaeli, 2017). A high P/E ratio typically indicates that investors predict more earnings growth over the next several years, whereas organizations with a low P/E ratio are expected to have lower growth whereas a low P/E suggests that a company is either now undervalued or performing remarkably well in comparison to its historical tendencies (Ghaeli, 2017).

$$Price - to - Earnings\ (P/E)\ Ratio = \frac{Market\ Value\ per\ Share}{Earnings\ per\ Share}$$

9) The enterprise multiple, also known as the EV/EBITDA ratio, is a financial ratio that compares a company's enterprise value which is an estimate of the market

value of the company's operating assets to its earnings before interest, taxes, depreciation, and amortization (EBITDA) (Ross et al, 2016). There is evidence that investors can benefit from the EV/EBITDA multiple. EV/EBITDA multiple, for instance, is a helpful quantitative metric that explains market values and predicts stock returns better than operational profit does (Mauboussin, 2018).

$$Enterprise\ Multiple = \frac{Enterprise\ value\ (EV)}{EBITDA}$$

where

$EBITDA = Earnings\ before\ interest, taxes, depreciation\ and\ amortization$

Conclusion

Financial ratio analysis provides a comprehensive view of Microsoft's financial health and performance. By examining profitability, liquidity, solvency, and efficiency ratios, stakeholders can gain valuable insights into the company's strengths and areas for improvement. This analysis is crucial for informed decision-making and strategic planning.

Financial Statement Analysis Method of Microsoft Corporation

Financial statement analysis involves examining a company's financial statements to evaluate its financial health and performance. This section provides a detailed analysis of Microsoft's key financial statements: the income statement, balance sheet, and cash flow statement.

1. Income Statement Analysis:

The income statement provides a summary of Microsoft's revenues, expenses, and profits over a specific period. It helps in assessing the company's profitability and operational efficiency.

- **Revenue:**

- **Trend:** Microsoft's revenue has consistently increased over the years, driven by its diversified product portfolio, including software, cloud services, and hardware.
- **Major Revenue Sources:** Key revenue streams include Microsoft Office, Azure (cloud services), LinkedIn, Windows OS, and Xbox gaming.

- **Expenses:**
  - **Cost of Goods Sold (COGS):** Represents the direct costs attributable to the production of the goods sold by Microsoft.
  - **Operating Expenses:** Includes research and development (R&D), sales and marketing, and general and administrative expenses. Microsoft invests significantly in R&D to maintain its competitive edge.
- **Profitability:**
  - **Gross Profit:** The difference between revenue and COGS.

    Microsoft's gross profit margin is high, reflecting efficient production and pricing strategies. ○ **Operating Income:** Earnings before interest and taxes (EBIT). This metric indicates the company's core operational efficiency. ○ **Net Income:** The final profit after all expenses, taxes, and interest.

    Microsoft's net income growth reflects strong overall performance.

Example (2023 Data):

- **Revenue:** $211.9 billion
- **Gross Profit:** $135.6 billion
- **Operating Income:** $83.4 billion
- **Net Income:** $72.7 billion

2. Balance Sheet Analysis:

The balance sheet provides a snapshot of Microsoft's financial position at a specific point in time, detailing assets, liabilities, and shareholders' equity.

- **Assets:**

    - **Current Assets:** Includes cash and cash equivalents, accounts receivable, and inventories. Microsoft has substantial cash reserves, indicating strong liquidity.
    - **Non-Current Assets:** Includes property, plant, and equipment (PP&E), intangible assets, and goodwill. Significant investments in PP&E and acquisitions enhance long-term growth prospects.
- **Liabilities:**
    - **Current Liabilities:** Includes accounts payable, short-term debt, and other short-term obligations. Microsoft's current liabilities are manageable, given its strong liquidity.
    - **Non-Current Liabilities:** Includes long-term debt and other longterm obligations. Microsoft maintains a balanced debt profile to finance its growth initiatives.
- **Shareholders' Equity:**
    - **Common Stock and Retained Earnings:** Reflects the capital invested by shareholders and the cumulative earnings retained in the business. Microsoft's strong equity base indicates financial stability.

Example (2023 Data):

- **Total Assets:** $411.3 billion
- **Total Liabilities:** $183.0 billion • **Shareholders' Equity:** $150.4 billion

3. Cash Flow Statement Analysis:

The cash flow statement outlines Microsoft's cash inflows and outflows from operating, investing, and financing activities, providing insights into the company's cash management.

- **Operating Activities:**
    - **Cash Flow from Operating Activities:** Indicates cash generated from core business operations. Microsoft's strong cash flow from operations reflects its ability to generate substantial cash from its business activities.
- **Investing Activities:**
    - **Cash Flow from Investing Activities:** Includes purchases of PP&E, acquisitions, and investments. Microsoft invests heavily in new technologies and acquisitions to drive future growth.

- **Financing Activities:**
    - **Cash Flow from Financing Activities:** Includes dividends paid, stock repurchases, and issuance/repayment of debt. Microsoft returns value to shareholders through dividends and share buybacks while maintaining a prudent capital structure.

Example (2023 Data):

- **Cash Flow from Operating Activities:** $89.0 billion
- **Cash Flow from Investing Activities:** $(21.0) billion (indicating net outflow due to investments)
- **Cash Flow from Financing Activities:** $(50.0) billion (indicating net outflow due to dividends and stock repurchases)

Conclusion:

The financial statement analysis of Microsoft Corporation reveals a robust financial position, characterized by consistent revenue growth, strong profitability, substantial cash reserves, and prudent debt management. By analyzing the income statement, balance sheet, and cash flow statement, stakeholders can gain valuable insights into Microsoft's financial health, operational efficiency, and long-term sustainability. This analysis supports informed decision-making and strategic planning for investors, management, and other stakeholders.

- # Data Collection

 Primary Data: Since this study focuses on secondary data analysis, primary data collection is not required.
 Secondary Data: The data is collected from various reliable secondary sources, including:

- Microsoft's annual reports and financial statements (income statement, balance sheet, cash flow statement).
- Financial databases such as Bloomberg, Reuters, and Yahoo Finance.

- Industry reports and market analysis documents.
- Relevant literature, including financial analysis textbooks, research papers, and industry publications.

What Is Secondary Data?

The secondary data method involves the collection and analysis of data that has already been gathered and published by other sources. This method is particularly useful for conducting a financial performance analysis of a well-established company like Microsoft Corporation, as it leverages existing data from reliable and authoritative sources. Below is a detailed explanation of the secondary data method from the perspective of this project.

1. Definition of Secondary Data:

Secondary data refers to information that has been collected, recorded, and published by other organizations, researchers, or entities for purposes other than the current research project. It is contrasted with primary data, which is collected directly by the researcher for a specific research purpose.

2. Relevance to the Project:

For the financial performance analysis of Microsoft Corporation, secondary data is essential because it provides comprehensive, accurate, and up-to-date information about the company's financial status. Using secondary data allows for a thorough examination of Microsoft's financial statements, industry reports, and other pertinent documents.

3. Sources of Secondary Data:

- **Financial Statements:** Annual reports, income statements, balance sheets, and cash flow statements published by Microsoft.
- **Regulatory Filings:** Documents filed with regulatory bodies such as the U.S. Securities and Exchange Commission (SEC), including 10-K and 10-Q reports.

- **Financial Databases:** Reputable financial databases like Bloomberg, Reuters, Yahoo Finance, and others that provide historical financial data and key financial metrics.
- **Industry Reports:** Reports from market research firms and industry analysts that provide insights into the technology sector and competitive landscape.
- **Academic Journals and Books:** Publications that discuss financial analysis methodologies, industry trends, and case studies relevant to Microsoft.
- **News Articles and Press Releases:** Media coverage and official press releases that provide context and updates on Microsoft's business activities and strategic initiatives.

4. Data Collection Process:

- **Identifying Relevant Sources:** Determine the most credible and relevant sources of secondary data for Microsoft's financial performance analysis.
- **Data Extraction:** Extract the necessary financial data, such as revenue, expenses, net income, assets, liabilities, and equity from the identified sources.
- **Data Organization:** Organize the collected data into structured formats (e.g., spreadsheets, databases) to facilitate analysis.
- **Data Verification:** Cross-check the extracted data with multiple sources to ensure accuracy and reliability.

5.Advantages of Using Secondary Data:

- **Cost-Effective:** Reduces the need for primary data collection, saving time and resources.
- **Time-Saving:** Provides immediate access to extensive data that has already been compiled and published.

- **Comprehensive Coverage:** Offers a broad view of Microsoft's financial performance through various data sources.
- **Historical Perspective:** Enables the analysis of long-term trends and patterns using historical data.

6. Limitations of Secondary Data:

- **Relevance:** Secondary data may not always perfectly align with the specific research objectives.
- **Timeliness:** Some secondary data may be outdated, affecting its relevance to current analysis.
- **Data Quality:** The accuracy and reliability of secondary data depend on the credibility of the original sources.
- **Lack of Control:** Researchers have no control over how secondary data was collected and processed.

Conclusion:

The secondary data method is crucial for the financial performance analysis of Microsoft Corporation. By utilizing a variety of credible sources, this method enables a comprehensive and accurate assessment of Microsoft's financial health, operational efficiency, and market position. It supports informed decision-making and strategic planning by providing valuable insights derived from existing, well-documented financial data.

Tools and Techniques for Financial Performance Analysis

For a comprehensive financial performance analysis of Microsoft Corporation, various tools and techniques can be utilized to collect, organize, analyze, and visualize data. Here's a detailed look at how Excel, SQL, and Power BI can be employed in this project:

1. Microsoft Excel:

Excel is a versatile tool widely used for data analysis and financial modeling.

- **Data Organization:**
  - Use Excel to input and organize financial data from Microsoft's financial statements, industry reports, and other sources.
  - Create structured spreadsheets with separate sheets for income statements, balance sheets, and cash flow statements.
- **Financial Ratio Calculation:**
  - Build formulas to calculate key financial ratios such as profitability, liquidity, solvency, and efficiency ratios. ○ Automate ratio calculations using Excel functions like SUM, AVERAGE, IF, VLOOKUP, and INDEX/MATCH.
- **Trend Analysis:**
  - Utilize Excel's charting tools to create line charts, bar charts, and pie charts for visualizing trends in revenue, expenses, profits, and other financial metrics over time. ○ Apply conditional formatting to highlight significant trends and anomalies.

- **Pivot Tables:**
  - Use pivot tables to summarize large datasets, filter data dynamically, and perform multidimensional analysis. ○ Analyze data by different dimensions such as time periods, product segments, and geographic regions.
- **Scenario Analysis and Forecasting:**
  - Conduct scenario analysis by creating different financial models to simulate various business conditions. ○ Use Excel's FORECAST and

TREND functions for projecting future financial performance based on historical data.

2. Microsoft Power BI:

Power BI is a powerful data visualization and business intelligence tool.

- **Data Integration:**
  - Import data from various sources, including Excel files, SQL databases, and online services, into Power BI. ○ Use Power BI's data transformation capabilities (Power Query) to clean, reshape, and integrate data for analysis.
- **Interactive Dashboards:**
  - Create interactive dashboards to visualize Microsoft's financial performance using a variety of visualizations such as bar charts, line charts, pie charts, and tables. ○ Use slicers and filters to allow users to interact with the data and explore different aspects of financial performance.

- **Custom Visuals:**

- Implement custom visuals to display financial metrics in unique and insightful ways. ○ Utilize Power BI's custom visual library to add specialized visualizations tailored to specific analysis needs.

- **Real-Time Data Analysis:**
  - Connect Power BI to real-time data sources for up-to-date financial analysis.
  - Set up data refresh schedules to keep the analysis current and relevant.
- **Advanced Analytics:**
  - Leverage Power BI's advanced analytics features, such as clustering, forecasting, and trend analysis, to gain deeper insights into Microsoft's financial data. ○ Use Power BI's integration with R and Python for more sophisticated data analysis and visualization.

Conclusion:

Using Excel, SQL, and Power BI together provides a comprehensive toolkit for conducting a detailed financial performance analysis of Microsoft Corporation. Excel offers powerful data manipulation and calculation capabilities, SQL provides robust data extraction and querying functions, and Power BI delivers advanced data visualization and interactive analysis tools. Combining these tools ensures a thorough, accurate, and insightful analysis that supports informed decision-making and strategic planning.

7.Data Analysis and Interpretation

Data analysis and interpretation are interlinked processes that involve systematically examining data to uncover patterns, trends, and insights (data analysis) and then making sense of these findings by understanding their implications and drawing actionable conclusions (data interpretation). Together, these processes enable informed decision-making, strategic planning, and effective communication of findings in various fields, including financial performance analysis.

Data analysis and interpretation are integral to the financial performance analysis of a company like Microsoft. They enable informed decision-making, trend identification, performance evaluation, risk management, and more. By leveraging data effectively, Microsoft can enhance its efficiency, strategic planning, stakeholder communication, and competitive advantage.

To analyze and interpret the financial performance of Microsoft Corporation, we will break down the analysis into several key points:

- Financial Ratio Analysis
- Financial Statement Analysis
- Comparative Analysis
- SWOT Analysis
- Trend Analysis.

A COMPREHENSIVE ANALYSIS OF MICROSOFT CORPORATION'S FINANCIAL RATIOS

ABSTRACT

The study focuses on evaluating the financial performance of Microsoft Corporation using various financial ratios. These ratios provide a detailed view of the company's financial health and can be useful for investors to determine if it is a good investment. The analysis is based on Microsoft's annual financial reports from 2018 to 2022, which is the period ending June 30.

1. Liquidity ratios analysis

The greater a company's liquidity ratio, the more liquid their assets and the greater their ability to pay off short-term debts. It is quite crucial to maintain an adequate level of liquidity within the company (Eljelly, 2004). Figure 1 shows two liquidity ratios, current and cash ratio to shows the liquidity of Microsoft from period 2018 to 2022.

Period	Current Ratio	Cash Ratio
2018	2.90	2.29
2019	2.53	1.93
2020	2.52	1.89
2021	2.08	1.47

2022	1.78	1.10

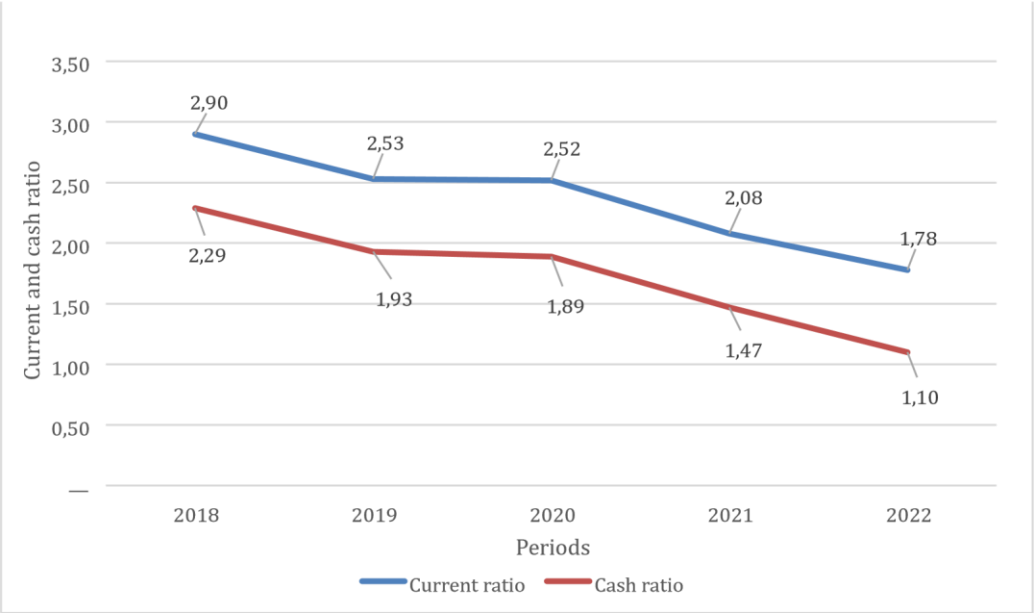

Figure 1. Liquidity Ratios of Microsoft Corporation

When we analyze the current ratio for Microsoft from the period 2018 to 2022, we can see a declining trend. There has been a decline of 38,62% from the year 2018 to 2022. Normally, a current ratio slightly higher than the industry average is considered a good sign that the company is utilizing its assets properly. As if the company has a current ratio of 2 that means that the company can pay twice that of their current liabilities. This is considered a good ratio as it tells the investors that the company has enough assets to their current liabilities.

The average industry current ratio for tech companies is 1.6 and currently Microsoft sits at 1.78 which is higher than the industry average, so this is a good sign for the investors as the company is utilizing its assets properly. If we compare the ratio to Google, which is Microsoft's biggest competitor, then their current ratios for the year 2022is 2.81 which is 36% more than Microsoft's ratio. We can also see that since 2018, Google also had a decline of 32,28% in their current ratio from 4.15 to 2.81 and if we look at the overall industry average there has been a decline of 19,5% from 2018 to 2022. This shows that the overall industry average indicates the utilization of their assets. And Microsoft has been doing a good job in coming closer to the industry average as if the company has too high of current

ratio than the industry average then the company is not utilizing its current assets and short-term financing.

Cash ratio is the most common indicator of a company's liquidity. This metric demonstrates the company's ability to pay all its current liabilities without selling or liquidating other assets if it is forced to do so immediately. A good cash ratio is closer to 1 as this indicates that the company can pay all its current liabilities without liquidating its assets. This is a very essential ratio for a tech company as most tech companies only has cash and not other assets like inventory to pay their current liabilities. Microsoft has been maintaining its current ratio of more than 1 from 2018 to 2022. But we can see that the ratio has been declining over the years since 2018. This can be explained by their increasing current liabilities form $58.48B in 2018 to $95.08B in 2022 which is an 62,5% increase since 2018. This can be explained by their acquisitions of LinkedIn valued at $26,2B which was financed primarily through the issuance of new indebtedness.

The current ratio benchmark for tech companies on average is 1.15 over the period 2018 to 2022 and for current period the benchmark is 0.98, so in comparison Microsoft has been doing well to have enough cash on hand to pay its current liabilities. If we compare the ratio to Google then they have a higher cash ratio then Microsoft, on average the company has a ratio of 2,5 over the period 2018 to 2021 which is quite higher than the industry average. This indicates that Google normally have more than two times cash available to pay their current liabilities. This is normal for a company like Google as, most tech companies are always looking for acquisitions to expand their business and find opportunities to increase their revenue growth

Financial leverage ratios analysis

Financial leverage ratio is a metric that measures the extent to which a company is using debt to finance its operations. Ideally the debt-to-equity ratio should be between 0.4 to 0.6 depending on the industry. Investors prefer to invest in companies with a lower debt to equity ratio as it indicates that the equity of company's shareholder is bigger, and they don't require to finance their operation with outside capital.

Period	D/E Ratio
2018	0.97
2019	0.77
2020	0.60
2021	0.48
2022	0.37

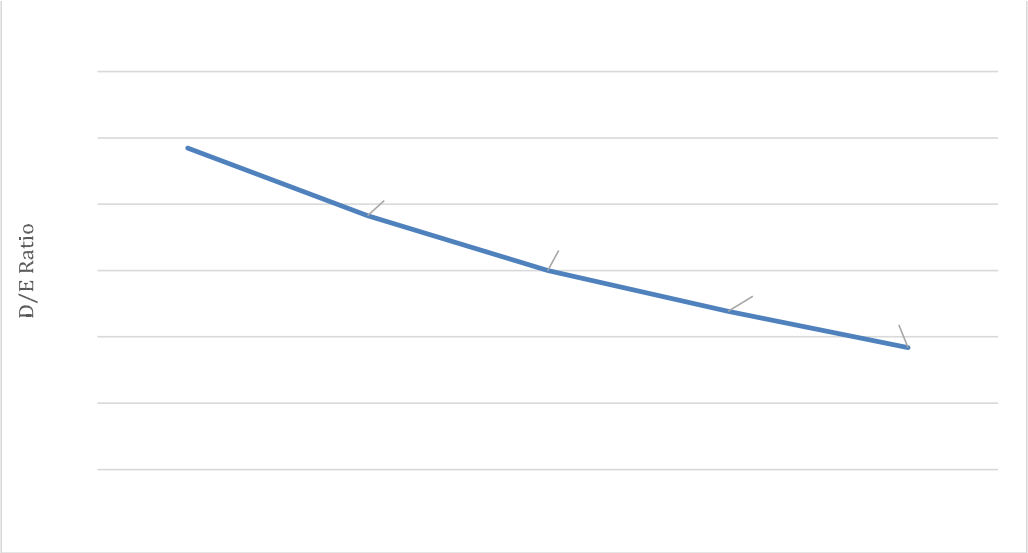

Figure 2. Debt to equity ratio of Microsoft corporation

The debt-to-equity ratio of Microsoft has been declining from 2018 to 2022. Since 2018 the ratio has declined nearly 61,2%, starting from 0,97 to 0,37 in 2022. We can see that in 2018 most of the operations were financed with debt by shareholders in comparison to 2022, where the debt financing has declined to 0.37. If we compare this to the tech industry average ratio over the 2018 to 2022 period, the ratios have been 0.8, which is very high in comparison to Microsoft. This indicates that Microsoft has been doing well in financing its operation with its own equity rather than with debt. Google's average ratio, on the other hand, has been very stable over the years, with an average of 0.35 from the period 2018 to 2,022, which indicates that the company finances most of their operation with shareholders' equity.

Period	Net Debt to EBITDA
2018	1.17
2019	1.01
2020	1.00
2021	0.77
2022	0.44

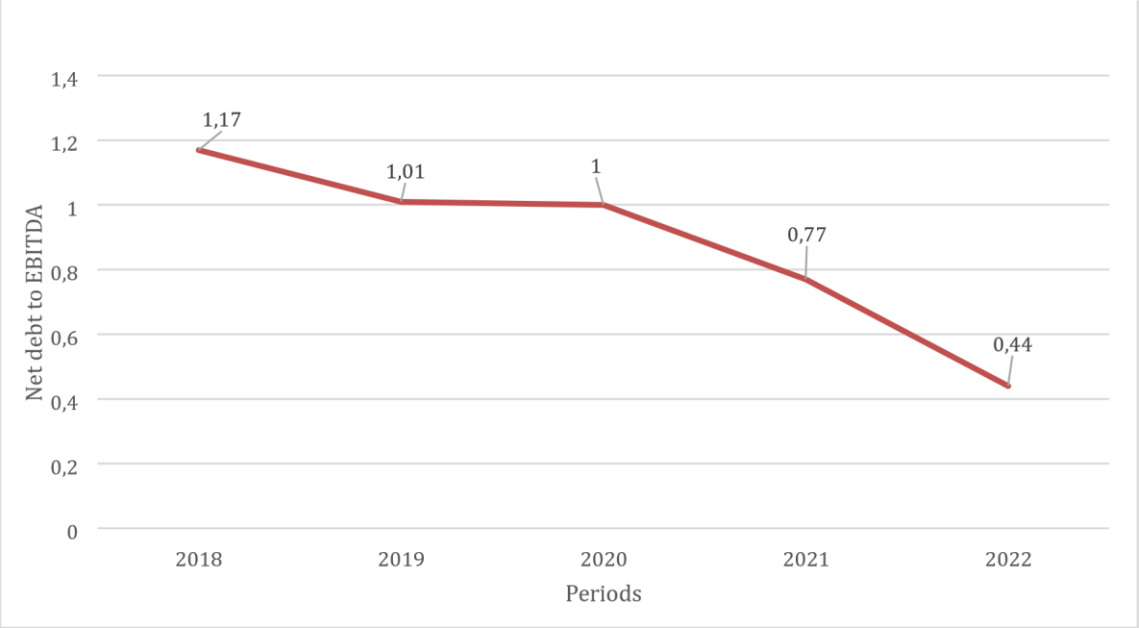

Figure 3. Net debt to EBITDA ratio of Microsoft corporation

Figure 3 also indicates a decaling net debt to EBITDA ratio from the period 2018 to 2022. Ideally this also behaves like debt-to-equity ratio and a lower ratio is always preferred by an investor. Based on the company's liquid assets and EBITDA, a higher net debt-to-EBITDA ratio suggests that the company may have trouble meeting its financial obligations. Microsoft has managed to decrease their net debt to EBITDA ratio by 62,39% from 2018 to 2022 which is good indicator of their finances. If we compare that to Google, the ratio is high, their net debt to EBITDA ratio on average is 0.25. This is again due to their low debt financing of operations.

Usually, technology companies tend to raise capital through equity financing rather than debt financing for a number of reasons. One reason is that equity financing allows a technology company to access capital without incurring additional debt. This can be particularly appealing to technology companies, which may be hesitant to increase their debt levels to maintain a strong financial position.

○ Profitability ratios analysis

For the majority of profitability ratios, investors favor ratios that are higher because they suggest that a company can make more profit with the same amount

of revenue. A corporation with a high profitability ratio is more efficient and productive than one with a low profitability ratio, as it can make more profit with less capital and resources.

For Microsoft's profitability ratios analysis, we will be using gross profit margin, return on equity (ROE), and return on assets (ROA) ratios. The gross profit margin for Microsoft have been quite linear from the period 2018 to 2022. Starting at 65.25% in 2018 to 68.40% in 2022 which is a 4.82% increase since 2018. It is good for a company to have a gross profit margin between 50% to 70%. This indicates that for every dollar of revenue generated $0.50-$0.70 is retained while remaining is attributed to the cost of goods sold. A higher gross profit margin is always preferred as that indicates that the company is successfully earning profit over and above its costs.

The industry average for gross profit margin on average is 69% and Microsoft is near this range over the years which is a good sign for the investors. Microsoft is doing quite well if we compare their gross profit margin to Google. On average over the period 2018 to 2022, Google's gross profit margin is 55.97% which is lower than Microsoft's margin of 67.25% which indicates that Microsoft is efficiently managing its labor and suppliers in the production process than Google.

Periods	**Gross Profit Margin**
2021	55.25%
2022	62.99%
2023	67.56%
2024	68.99%
2025	66.10%

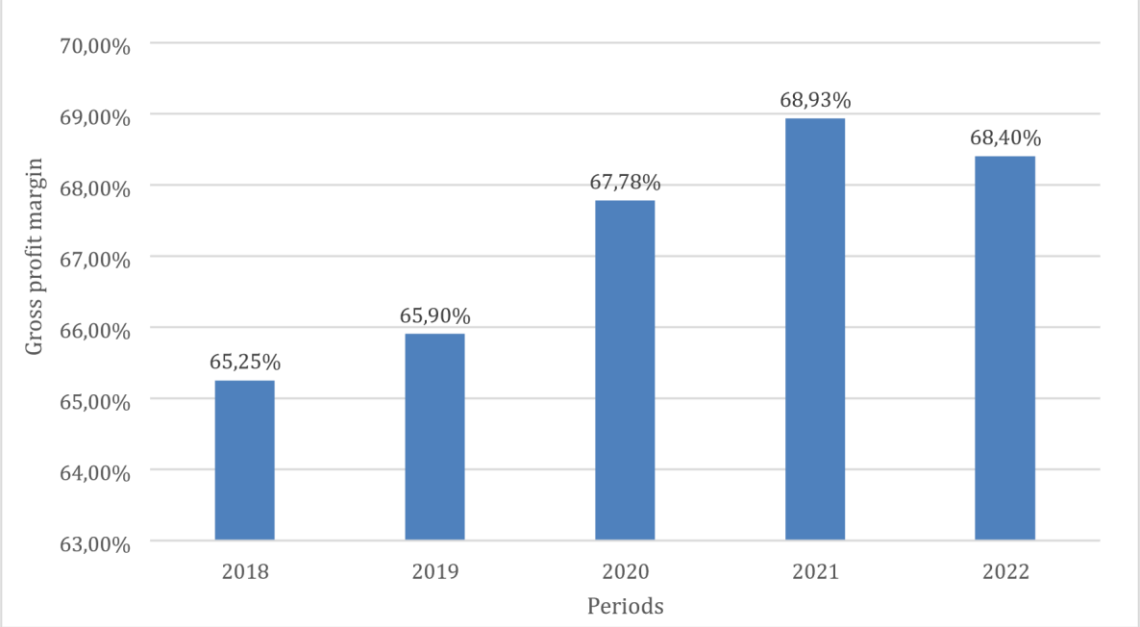

Figure 4. Gross profit margin of Microsoft Corporation

The return on equity on the other hand had a big jump from 20.03% in 2018 to 38.35% in 2019 and then has been stable with an average of 40.65% since 2019. This was due to their 16% increase in profit margin ratio from 15% in 2018 to 31% in 2019. Normally a good or bad ROE depends on the industry average or the main competitors of the company. A low ROE the company is earning less to its shareholders equity and a high ROE indicates that the companies is efficiently using their shareholder's equity to generate income. Microsoft's return on equity has been stable since 2019 which is a good indicator for the investors and shows them that the company is successfully able to generate profits with respect to their shareholders equity. The current return on equity for the period 2022 is 43.68% which indicates that the company can earn $43.68 on every $100 of its share capital. If we compare this to the tech sector's average return on equity of 36.35% than Microsoft has been doing quite good, then the industry average. Microsoft is also doing quite well in comparison to

Google's average return on equity ratio of 20,34% over the period 2018 to 2022. On average Microsoft ratio is 16.18% higher than Google's ratio.

Period	Return on Equity (ROE)	Return on Assets (ROA)
2018	6.40%	20.03%
2019	38.35%	13.69%
2020	37.43%	14.70%
2021	43.15%	18.36%
2022	43.68%	19.94%

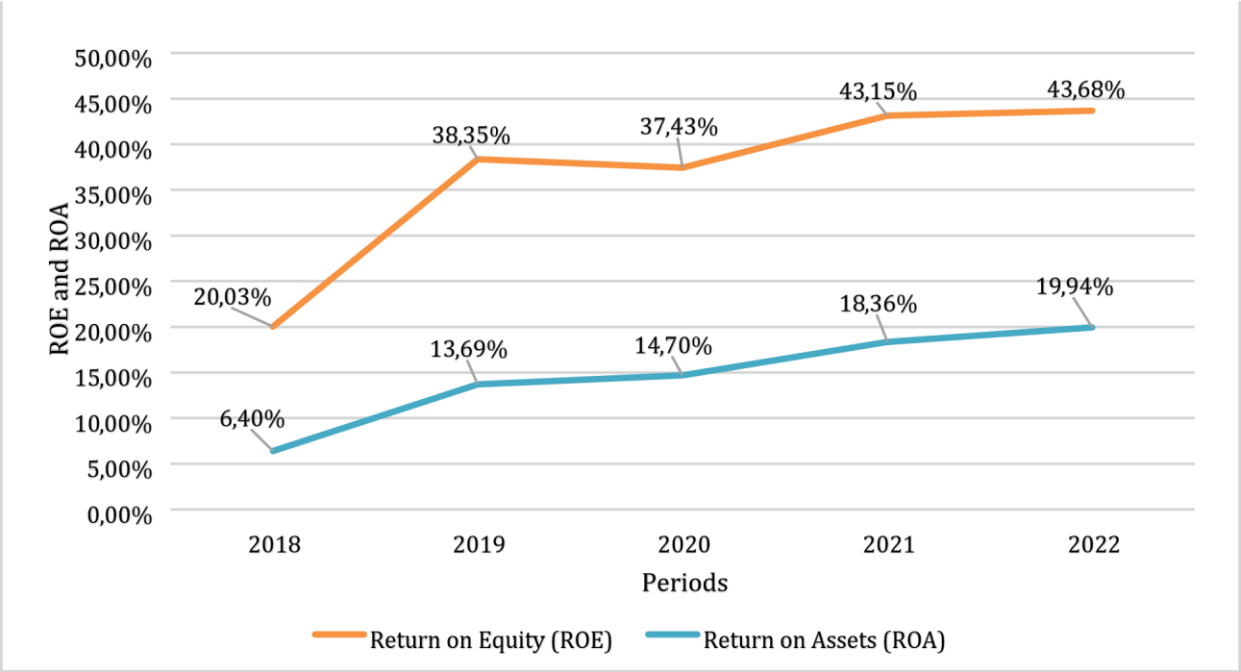

Figure 5. ROE and ROA of Microsoft Corporation

Like the return on equity, return on assets also had a huge jump from 6.40% in 2018 to 13.69% in 2019. This is nearly a 113.9% increase since 2018, the reason for this a significant increase in their net income which has increased from $16.571B in 2018 to $39.240B in 2018 which was an 136% increase in their net income. The return on equity since 2019 has been stable with an

average of 16.67% from the period 2019 to 2022. A stable rise in return on assets indicates the company is an efficient job of increasing its profits per each investment dollar it spends. In comparison a falling or low ratio indicates that the company has over invested in their assets and have failed to produce revenue growth which can be a red flag for the investors. A higher ratio is always preferred by the investors, but this can be highly depended on the specific industry.

The average within the tech sector for return on equity on average is 12.96%. And Microsoft has been managing a stable ROA of 16.67% since 2019 which is higher than the industry average. This indicates that Microsoft can generate $0.17 for every $1 the company has in assets. On the other hand, Google's ROA on average is 16.5% over the period 2019 to 2022 which is similar to Microsoft's ratios which indicates that the companies is efficiently managing its assets to generate profits.

○ Valuation ratios analysis

Valuation ratios, also known as market value ratios, are measurements of the appropriateness of a company's share valuation and the potential return for an investor. A potential investor can determine whether the shares are overvalued, undervalued, or at a fair price by calculating their market value. We will look at different valuation ratios such as price to earnings (P/E) ratio, price to sales (P/S) ratio, and earnings before interest, taxes, depreciation, and amortization (EBITDA) ratio for Microsoft.

The P/E ratio of Microsoft declined by 42,28% from 2018 to 2019 which is due to their increase in earnings per share (EPS) from 2,16 in 2018 to 5,14 in 2019 which was a 137,96% increase form 2018. This indicates that the stock price was overvalued with respect the EPS in 2018 and the increase in EPS from 2018 to 2019 made the stock more valued for the share price. An increase in EPS indicates that the company is generating more profits that can be distributed to the shareholders. A higher EPS is a good indication of company's efficiency to its investors.

This can also result in more dividend payout as earnings increase. Since 2019, Microsoft can maintain a stable P/E ratio average of 31,34, with a decline in 2022 of 28,34 from previous year ratio of 35,14. This can be explained by the drop in their share price from $286,5 from 2021 to $276,41 in 2022. Even though the EPS has increased from 8,15 in 2021 to 9,75 in 2022.

Period	Microsoft	Google

2018	50	48.82
2019	28.86	21.86
2020	35.04	23.01
2021	35.14	32.15
2022	28.34	20.27

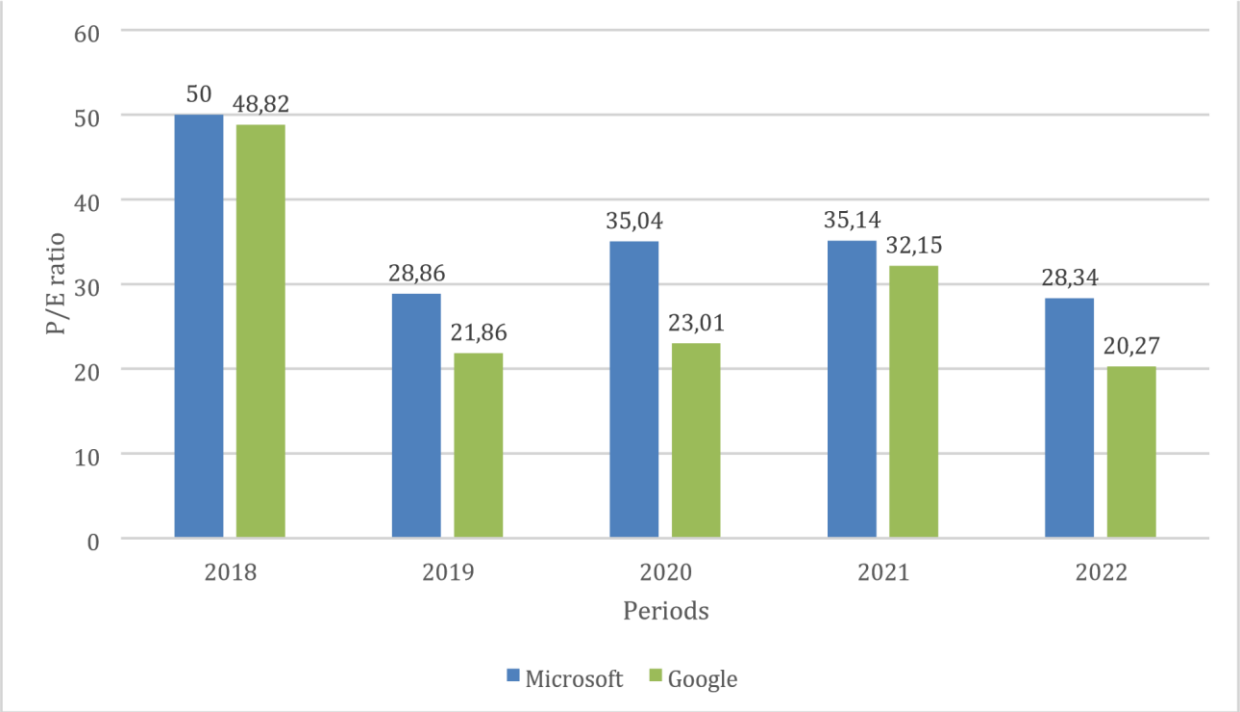

Figure 6. P/E ratios of Microsoft Corporation and Google Microsoft stock price fell from their all-time highest price of $339,89 on November 19,2021 to $276,41 on June 30,2022. The tech industry benchmark on the other hand averages about 26,9 in terms of P/E ratio. Since 2019, Microsoft had an average of 31,34 which is higher than the industry average but is still a good ratio that indicates a strong earnings per share growth with respect to their stock price. If we look at Google's average P/E ration, then its 24,3 which is quite lower than

the Microsoft ratio. This indicates that the investors are paying less per dollar for company's earnings per share. Although the P/E ratio currently sits at 20,27 in 2022 but their stock price has declined form $149,84 on November 18, 2021, to $108,96 which is a 27,28 percent decline from 2021. This is due to current uncertainties in the markets from the COVID pandemic and signs of recession. Both companies are still good if we look at the overall tech industry and there are no sings of red flags.

Additionally, the price to sales ratio (P/S) has been increasing steadily as seen the Figure 7. There is a slight decline from 12,81 in 2021 to 10,40 in 2022. This can be explained by their decline in stock price from $286,5 in 2021 to $276,41 in 2022 same as the decline in case of P/E ratio. But overall, the ratio has been stable over the period 2018 to 2022 with an average ratio of 9,9. If we compare that to the industry average which is 8,15 then its slightly higher. A low P/S ratio indicates that the stock might be undervalued and implies that the company is generating more revenue for every dollar invested in the company. And a higher P/S ratio indicates that the stock might be overvalued, and the markets is willing to pay higher prices for each dollar of sales.

Period	**Microsoft**	**Google**
2018	7.51	6.84
2019	8.38	5.47
2020	10.85	5.77
2021	12.81	8.78
2022	10.4	5.61

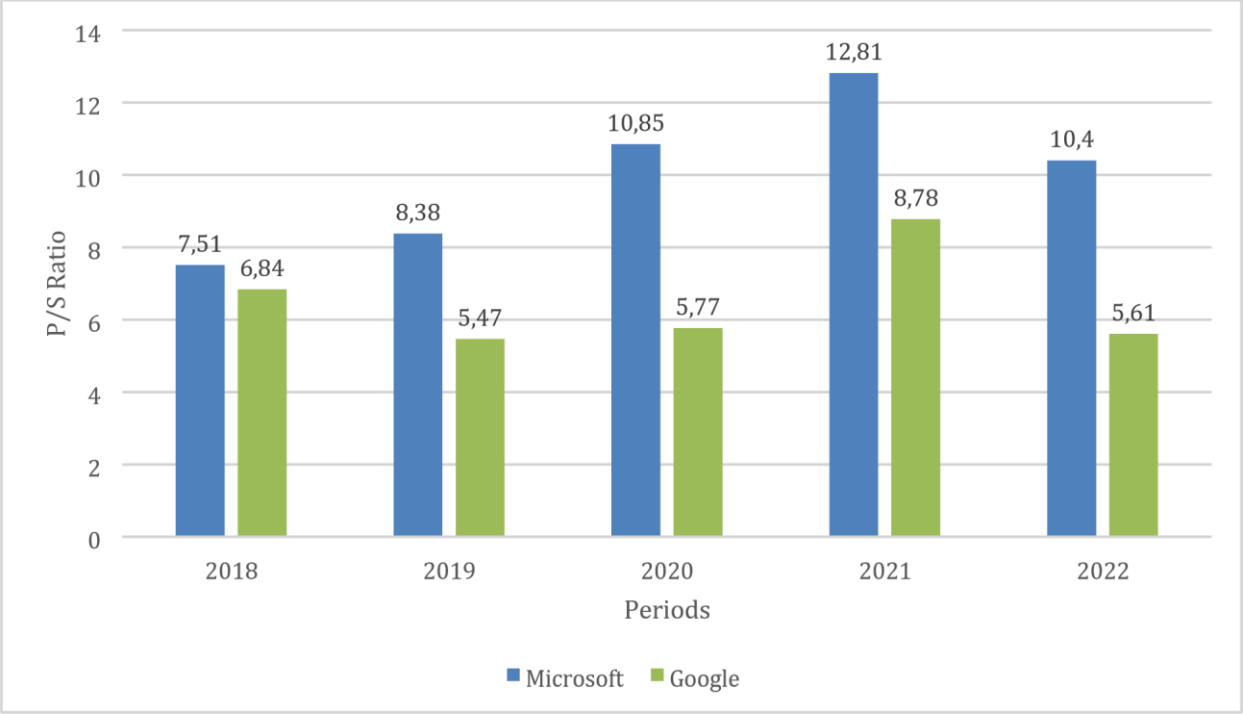

Figure 7. P/S ratios of Microsoft Corporation and Google

The P/S ration should only be compared in terms of industry average and within the same sector to get a proper analysis. It won't make sense when comparing two companies in different sectors as the ratio varies across industry. Google's on the other hand has a low P/S ratio in comparison to industry average and Microsoft. Their average ratio for the period 2018 to 2022 is 6,5% which is 34% lower than Microsoft's ratio. This is due to their higher sales per share percentage with respect to their stock price. Google stock is undervalued, and the company is generating more in revenue with respect to its stock price.

The enterprise multiple (EV/EBITDA) of Microsoft has been growing since 2018 to 2021, from 15,67% to 24,59%. From 2021 to 2022 there has been a decline of 4,42% from 24,59% in 2021 to 20,17% in 2022. The decline of 4,42% can be explained by their decline in stock price in 2022 and a reduction in their cash and cash equivalents from $130,34B in 2021 to $104,74B in 2022.

Period	Microsoft	Google

2018	7.51	6.84
2019	8.38	5.47
2020	10.85	5.77
2021	12.81	8.78
2022	10.4	5.61

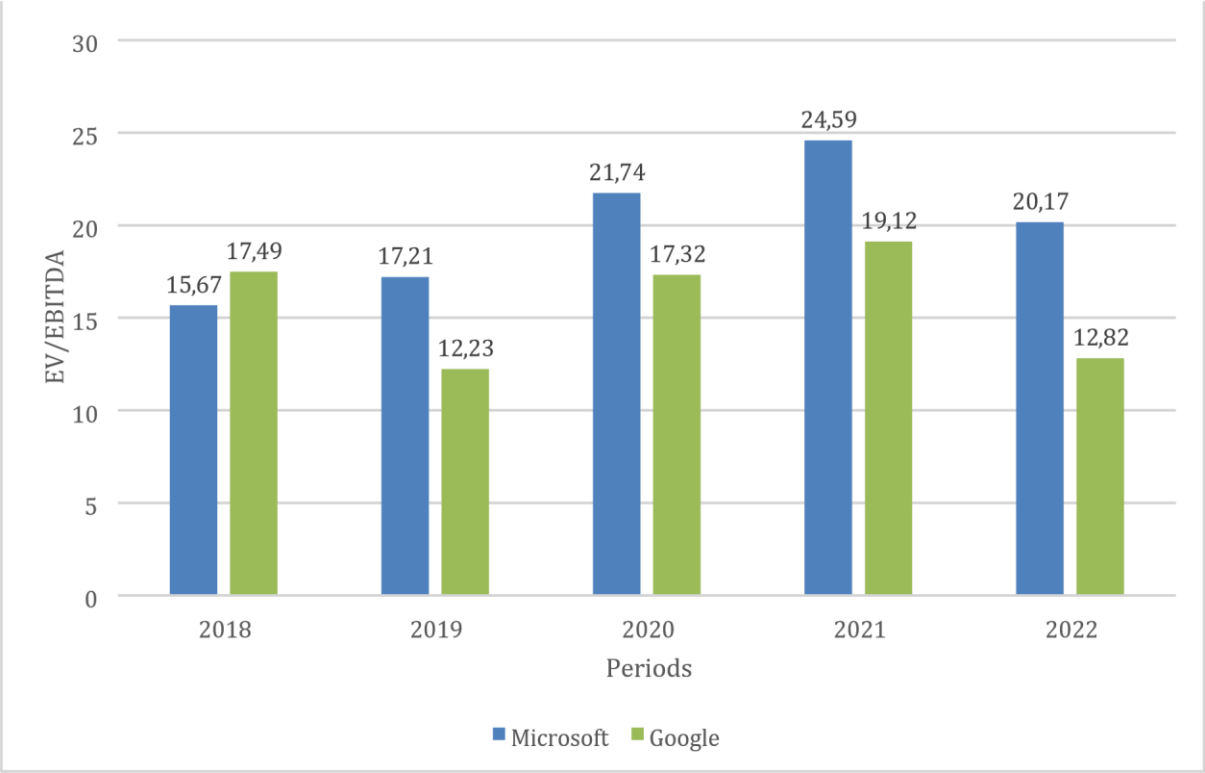

Figure 8. Enterprise multiple (EV/EBITDA) of Microsoft corporation and Google

This is normal when looking at the whole economic downturn in the tech sector such as high inflation, increasing interest rates and supply chain issues. Microsoft has been maintaining an average enterprise multiple of 19,87 over the period 2018 to 2022. When comparing to industry average of 17,58 the company is doing good. When comparing Microsoft's enterprise multiple to Google, then the ratio is lower than Microsoft. Google's average ratio for the period 2018 to 2022 is 15,76%

which is lower by 4,11% from Microsoft. This indicates that their stock is little undervalued and can grow in comping years with increased revenue and growth. Normally investors want a higher enterprise multiple since it indicates that the company has low debt levels and substantial cash reserves. Enterprise multiples enable investors to effectively assess the earnings yields of companies with varying debt levels and tax rates.

○ Tailored metric ratios analysis

There are many different ratios and metrics which are used by investors to analyze a company in different sectors and industries. Sometimes these ratios can be specifically tailored to the sector that can help the investor in comparing companies that operate in the same industry to find the better investment. One of these metrics is Beta (β).

Company	**Beta Value**
Microsoft	0.92
Google	1.05
Apple	1.25
Oracle	1.01
IBM	0.88
SAP SE	0.99
Industry Average	1.12

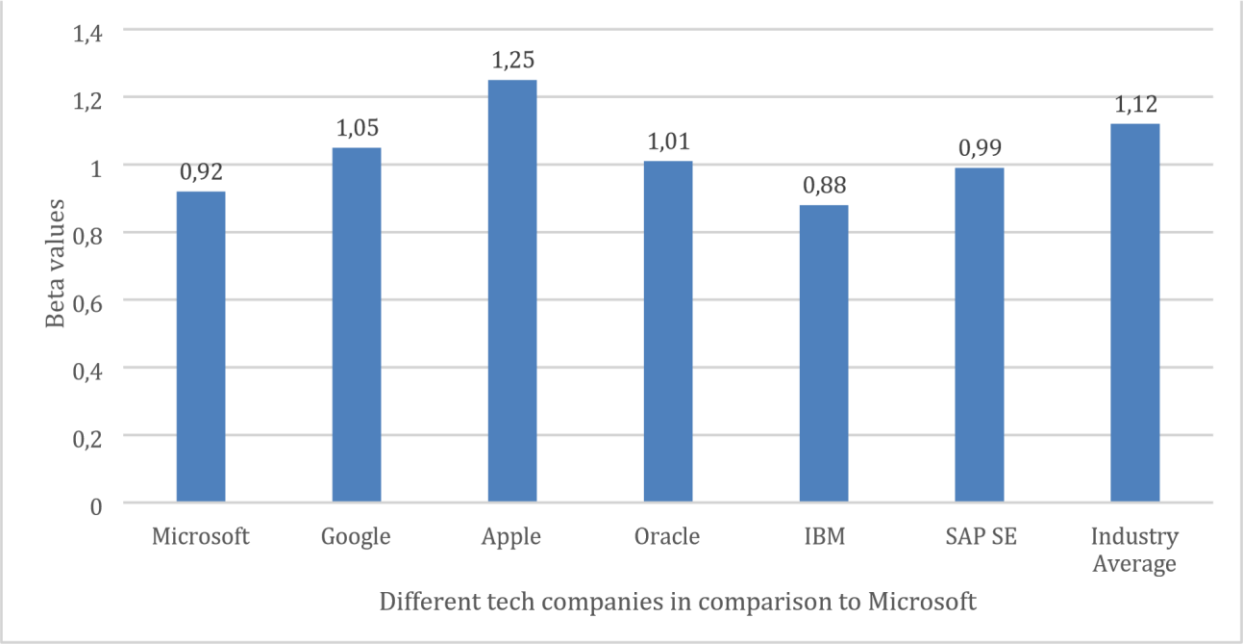

Figure 9. Beta (5 Year) values of different tech companies.

Beta is a measure that is used to indicate the volatility of a company's stock price to the market. A beta of a stock measures the volatility of an individual stock relative to the market's systematic risk. For instance, average asset has a beta of 1.0 relative to itself so in comparison a beta of 0.50 will have half the systematic risk (Ross et al, 2016). In comparison a beta of 2.0 will carry double the risk of an average asset (Ross et al, 2016). Beta which is greater than 1,0 indicates that the stock is more volatile than the broader market and a beta which is less than 1,0 suggests a stick that has lower volatility. A beta lower than 1,0 is considered a better option as this is less volatile than the market and will be a less risky for the investors. Normally tech companies' industry is slightly more volatile than the overall market. The industry average is 1,12 which indicates higher volatility and risk than Microsoft's beta. Microsoft's beta (5Year) is 0,92 which is lower than 1,0 and means the stock price will be less volatile than the market downturns. Normally the ideal beta should be near 1,0, which will give more stability for the investors. Google's beta in comparison to Microsoft is higher than 1,0 and is 1,05 (5Year) which indicates marginally more volatility with respect to the market. High beta stocks are preferred in a bull market when all the prices are going up which makes them a good investment as they will have higher returns than the overall market but in the current bear market lower beta stock are more preferred by the investors which are less volatile and reduces their risk.

Another important metric to look for while analyzing tech companies is their net income growth over the years. Net income growth shows how rapidly the company can grow year over year. From the year 2018 to 2019, we can see a huge net income growth of 136,8%. Since then, the company has grown their net income by 12,84% from 2019 to 2020 and further growth of 38,36% from 2020 to 2021. From 2021 to 2022, there was a decline in net income growth to 18,72% from 2021 which is result of the economic downturns and unstable market conditions.

Research and development (R&D) expenses is another metric which refers to the costs incurred by a business when developing new goods, processes, or technologies. Normally companies indicate a percentage of their revenues every year to R&D, Microsoft R&D expense have been increasing since 2018 from $14,73B to $24,51B in year 2022. Microsoft has been maintaining a stable 13% increase in R&D expense growth over the period 2018 to 2022 and normally allocates around $19,22B on average over the years. Investing in R&D is very important for tech companies like Microsoft and Google as they market is quite competitive, and you always must keep developing better technology and services than your competitor. By investing in R&D companies try to develop innovative products and services either by creating new technologies or use the existing technology to create new cutting edge products and services.

Period	**Microsoft (billion USD)**	**Google (billion USD)**
2018	14.73	21.42
2019	16.87	26.02
2020	19.27	27.57
2021	20.72	31.56
2022	24.51	35.36

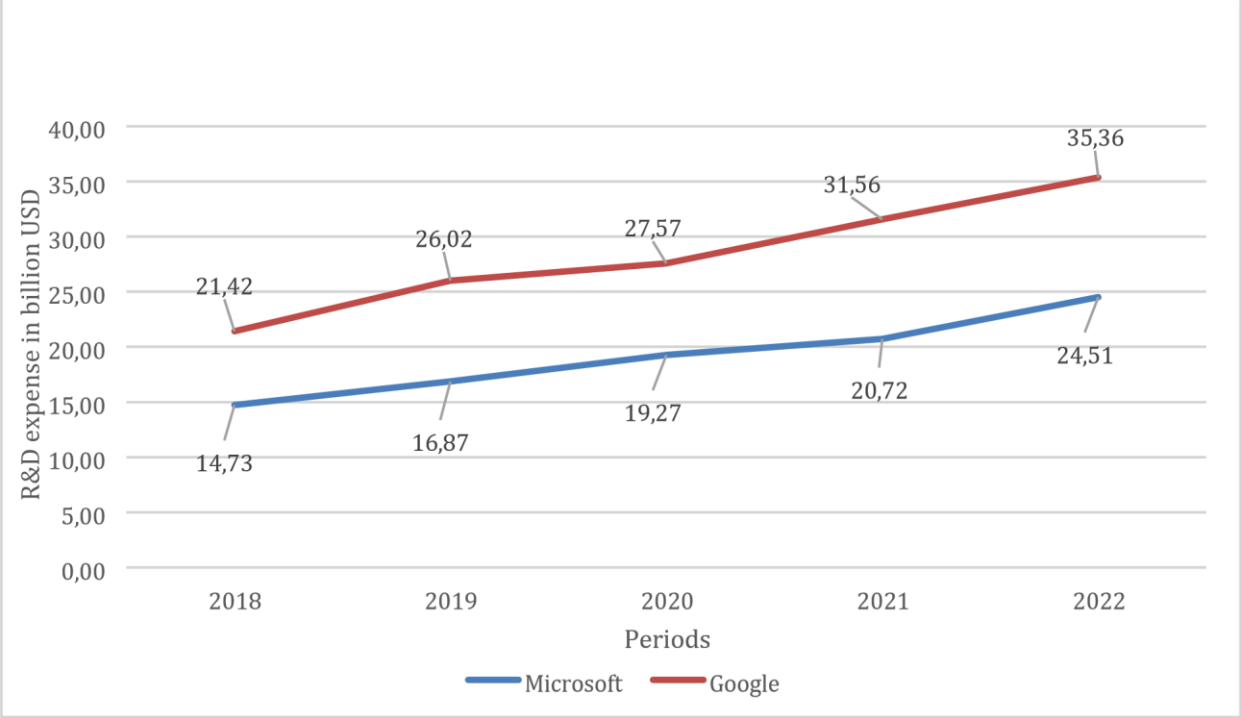

Figure 10. Research and Development expense (R&D) of Microsoft and

Normally companies invest 10% to 20% of their revenue to R&D expense, but this highly depends on the industry, on average the tech companies' industry average is around 11%. If we compare

Microsoft's R&D expense to Google, then their expense is much higher than that of Microsoft. On average Google has spent over $28,39B from the period 2018 to 2022. They also have an increasing R&D expense growth of 13,57% over the years. The main reason behind their R&D spending is their Cloud and AI business, where they have been heavily investing over the years. Google is just behind Microsoft in terms of market share in cloud business at 11% and plans to grow this in the coming years. Their high spending can also be explained by their phone market line-up, where Microsoft failed with their windows phone. But Microsoft is highly investing in their surface laptops line-up which are growing year over year and their successful game controller, the Xbox which is the biggest competitor to Google's Chromebook.

Period	Microsoft (Revenue per million in million USD)	Google (Revenue per million in million USD)
2018	0.87	1.40
2019	0.88	1.40
2020	0.93	1.30
2021	0.90	1.60
2022	0.82	1.40

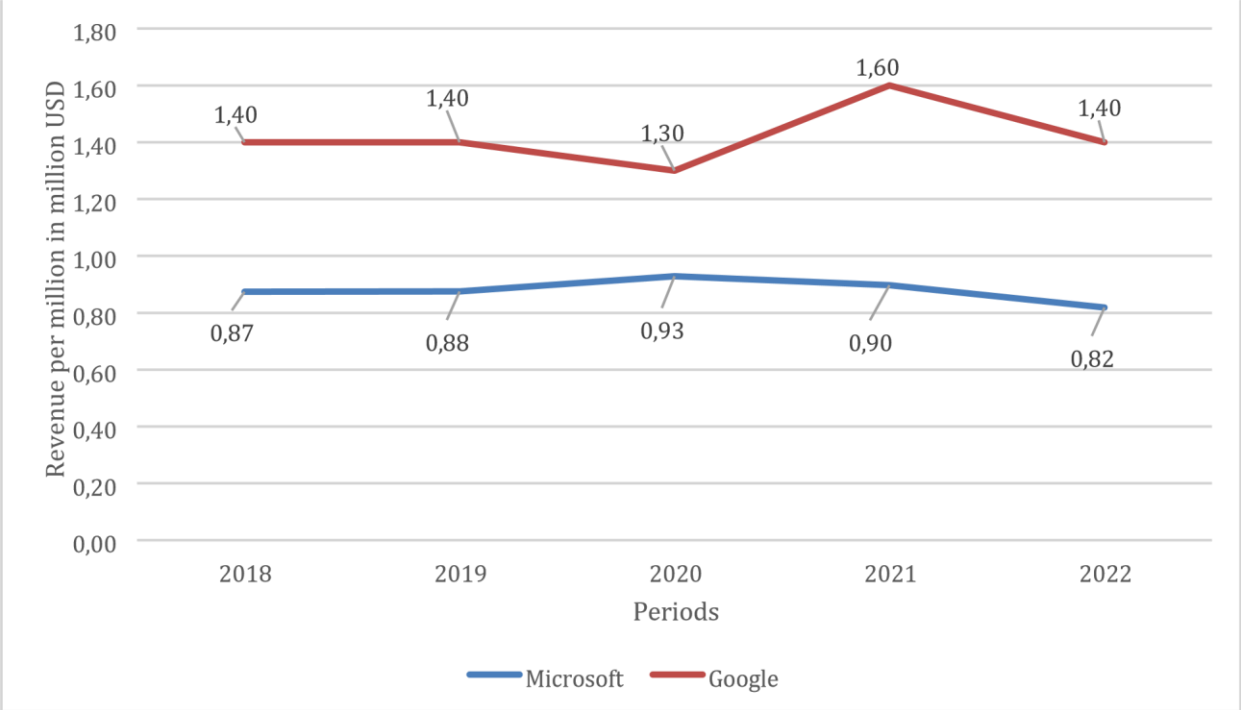

Figure 11. Revenue per employee of Microsoft and Google Revenue per employee is another useful analytical metric which evaluates the amount of revenue generated by an organization per employee. A company with a high

revenue per employee may be viewed as more efficient and lucrative than one with a low revenue per employee since it generates more income with a smaller workforce. Microsoft revenue per employee started to increase from $0,87M in 2018 to $0,93M in 2020 and then it declined to $0,82M in 2022. This in comparison to average revenue of $150K is quite higher than industry average. Google in comparison is much better in terms of revenue per employee, the company has been generating revenue per employee of $1,42 million over the period 2018 to 2022 which is much higher than that of Microsoft. This indicates that

Google's workforce can generate more profit with respect to their numbers than Microsoft.

A COMPREHENSIVE ANALYSIS OF MICROSOFT CORPORATION'S FINANCIAL STATEMENT

1. Income Statement of Microsoft Corporation 2018-2022

(In millions $, except per share amounts)

Year Ended June 30,	**2022**	**2021**	**2020**	**2019**	**2018**
Revenue					
Product	72,732	71,074	68,041	66,069	64,497
Service and other	125,538	97,14	74,974	59,774	45,863
Total revenue	**198,270**	**168,088**	**143,015**	**125,843**	**110,360**
Cost of revenue					
Product	19,064	18,219	16,017	16,273	15,420
Service and other	43,586	34,013	30,061	26,637	22,933
Total cost of revenue	**62,650**	**52,232**	**46,078**	**42,910**	**38,353**
Gross Margin	135,620	115,856	96,937	82,933	72,007
Research and Development	24,512	20,716	19,269	16,876	14,726
Sales and marketing	21,825	20,117	19,598	18,213	17,469

General and administrative	5,900	5,107	5,111	4,885	4,754
Operating income	83,383	69,916	52,959	42,959	35,058
Other income, net	333	1,186	77	729	1,416
Income before income taxes	83,716	71,102	53,036	43,688	36,474
Provision for income taxes	10,978	9,831	8,755	4,448	19,903
Net income	**72,738**	**61,271**	**44,281**	**39,240**	**16,571**
Earnings per share:					
Basic	9.70	8.12	5.82	5.11	2.15
Diluted	9.65	8.05	5.76	5.06	2.13
Weighted average shares outstanding:					
Basic	7,496	7,547	7,610	7,673	7,700
Diluted	7,540	7,608	7,683	7,753	7,794

(Source: Microsoft Annual Reports)

Appendix 2. Balance Sheet of Microsoft Corporation 2018-2022

(In millions $)

June 30,	**2022**	**2021**	**2020**	**2019**	**2018**
Assets					
Current assets:					
Cash and cash equivalents	13,931	14,224	13,576	11,356	11,946
Short-term investments	90,826	116,110	122,951	122,463	121,822
Total cash, cash equivalents, and short-term investments	104,757	130,334	136,527	133,819	133,768
Accounts receivable	44,261	38,043	32,011	29,524	26,481
Inventories	3,742	2,636	1,895	2,063	2,662
Other current assets	16,924	13,393	11,482	10,146	6,751
Total current assets	**169,684**	**184,406**	**181,915**	**175,552**	**169,662**
Property and equipment,	74,398	59,715	44,151	36,477	29,460
Operating lease right-of-use assets	13,148	11,088	8,753	7,379	6,686
Equity investments	6,891	5,984	2,965	2,649	1,862

Goodwill	67,524	49,711	43,351	42,026	35,683
Intangible assets, net	11,298	7,800	7,038	7,750	8,053
Other long-term assets	21,897	15,075	13,138	14,723	7,442
Total assets	**364,840**	**333,779**	**301,311**	**286,556**	**258,848**
Liabilities and stockholders' equity					
Current liabilities:					
Accounts payable	19,000	15,163	12,530	9,382	8,617

Appendix 2 continued

June 30,	**2022**	**2021**	**2020**	**2019**	**2018**
Current portion of long-term debt	2,749	8,072	3,749	5,516	3,998
Accrued compensation	10,661	10,057	7,874	6,830	6,103
Short-term income taxes	4,067	2,174	2,130	5,665	2,121
Short-term unearned revenue	45,538	41,525	36,000	32,676	28,905
Other current liabilities	13,067	11,666	10,027	9,351	8,744

Total current liabilities	**95,082**	**88,657**	**72,310**	**69,420**	**58,488**
Long-term debt	47,032	50,074	59,578	66,662	72,242
Long-term income taxes	26,069	27,190	29,432	29,612	30,265
Long-term unearned revenue	2,870	2,616	3,180	4,530	3,815
Deferred income taxes	230	198	204	233	541
Operating lease liabilities	11,489	9,629	7,671	6,188	5,568
Other long-term liabilities	15,526	13,427	10,632	7,581	5,211
Total liabilities	**198,298**	**191,791**	**183,007**	**184,226**	**176,130**
Commitments and contingencies					
Stockholders' equity:					
Common stock and paid-in capital – shares authorized 24,000	86,939	83,111	80,552	78,520	71,223
Retained earnings	84,281	57,055	34,566	24,150	13,682
Accumulated other comprehensive income	(4,678)	1,822	3,186	(340)	(2,187)
Total stockholders' equity	**166,542**	**141,988**	**118,304**	**102,330**	**82,718**
Total liabilities and stockholders' equity	**364,840**	**333,779**	**301,311**	**286,556**	**258,848**

(Source: Microsoft Annual Reports)

Appendix 3. Financial Ratios of Microsoft Corporation

(Source: Based on authors calculations from Microsoft annual reports)

(Source: Based on authors calculations from Microsoft annual reports)

(Source: Based on authors calculations from Microsoft annual reports) (Source: Based on authors calculations from Microsoft annual reports and Alphabet reports)

	June 30,2022	June 30,2021	June 30,2020	June 30,2019	June 30,2018
Current Ratio	1.78	2.08	2.52	2.53	2.9
Cash Ratio	1.10	1.47	1.89	1.93	2.29

Appendix 3 continued

	June 30,2018	June 30,2019	June 30,2020	June 30,2021	June 30,2022
Debt to Equity	0,97	0,77	0,60	0,48	0,37
Net Debt to EBITDA	1,17	1,01	1,00	0,77	0,44

(Source: Based on authors calculations from Microsoft annual reports and Alphabet reports)

	June 30,2018	June 30,2019	June 30,2020	June 30,2021	June 30,2022
Gross Profit Margin	65,25 %	65,90 %	67,78 %	68,93 %	68,40 %
Return on Equity (ROE)	20,03 %	38,35 %	37,43 %	43,15 %	43,68 %
Return on Assets (ROA)	6,40 %	13,69 %	14,70 %	18,36 %	19,94 %

Price to Earnings (P/E) Ratios					
	2018	2019	2020	2021	2022
Microsoft	50	28,86	35,04	35,14	28,34
Google	48,82	21,86	23,01	32,15	20,27

Price to Sales (P/S) Ratios					
	2018	2019	2020	2021	2022
Microsoft	7,51	8,38	10,85	12,81	10,4
Google	6,84	5,47	5,77	8,78	5,61

(Source: Based on authors calculations from Microsoft annual reports and Alphabet reports)

Enterprise Value to EBITDA (EV/EBITDA)					
	2018	2019	2020	2021	2022
Microsoft	15,67	17,21	21,74	24,59	20,17
Google	17,49	12,23	17,32	19,12	12,82

Companies	Microsoft	Google	Apple	Oracle	IBM	SAP SE	Industry Average
Beta(β) (5 Year) Benchmarks	0,92	1,05	1,25	1,01	0,88	0,99	1,12

(Source: Based on authors calculations from Microsoft annual reports)

Appendix 3 continued

Microsoft and Google R&D Expense (in billion$)					
	2018	2019	2020	2021	2022
Microsoft	14,73	16,87	19,27	20,72	24,51
Google	21,42	26,02	27,57	31,56	35,36

Reve nue Per Employee of Microsoft and Google (in million $)					
	2018	2019	2020	2021	2022
Microsoft	0,87	0,88	0,93	0,90	0,82
Google	1,40	1,40	1,30	1,60	1,40

(Source: Based on authors calculations from Microsoft annual reports)

Net income of Microsoft and Google					
	2018	2019	2020	2021	2022
Microsoft	16,57	39,24	44,28	61,27	72,74
Google	30,73	34,34	40,26	76,03	66,99

(Source: Based on authors calculations from Microsoft annual reports)

(Source: Based on authors calculations from Microsoft annual reports)

Comparative Analysis of Microsoft Corporation

Comparative analysis involves evaluating the financial performance of a company against its peers and industry benchmarks. For Microsoft Corporation, this can be achieved by comparing its financial metrics with those of its major competitors in the technology sector, such as Apple, Google (Alphabet), Amazon, and IBM. This analysis provides insights into Microsoft's relative performance, strengths, and areas for improvement.

Key Metrics for Comparative Analysis

1. **Revenue and Revenue Growth**
2. **Profitability Ratios**
3. **Liquidity Ratios**
4. **Solvency Ratios**
5. **Market Performance Ratios 1. Revenue and Revenue Growth**

Revenue Comparison:

Company	2021 Revenue (in billions)	2022 Revenue (in billions)	2023 Revenue (in billions)
Microsoft	$168.1	$184.9	$211.9
Apple	$365.8	$394.3	$394.3
Alphabet	$257.6	$282.8	$289.5
Amazon	$469.8	$513.9	$514.0
IBM	$57.4	$57.8	$60.5

Revenue Growth Rate:

Company	2021-2022 Growth	2022-2023 Growth
Microsoft	10%	14.6%
Apple	7.8%	0%
Alphabet	9.8%	2.4%
Amazon	9.4%	0.02%
IBM	0.7%	4.7%

2. Profitability Ratios Net Profit Margin:

Company	2021 Net Profit Margin	2022 Net Profit Margin	2023 Net Profit Margin
Microsoft	36.5%	39.0%	34.3%
Apple	25.9%	25.1%	24.6%
Alphabet	29.5%	21.2%	21.4%
Amazon	7.1%	2.0%	0.9%
IBM	7.1%	8.0%	7.2%

Operating Margin:

Company	2021 Operating Margin	2022 Operating Margin	2023 Operating Margin
Microsoft	42.7%	43.4%	39.3%
Apple	30.3%	29.3%	28.5%
Alphabet	30.6%	25.9%	25.1%
Amazon	5.3%	2.5%	2.4%
IBM	11.5%	13.1%	12.9%

3. Liquidity Ratios Current Ratio:

Company	2021 Current Ratio	2022 Current Ratio	2023 Current Ratio
Microsoft	2.23	2.22	2.20
Apple	1.07	1.07	1.08
Alphabet	3.05	2.92	2.80
Amazon	1.14	1.13	1.11
IBM	1.00	1.04	1.05

4. Solvency Ratios

Debt-to-Equity Ratio:

Company	2021 Debt-to-Equity	2022 Debt-to-Equity	2023 Debt-to-Equity
Microsoft	0.55	0.53	0.51
Apple	1.73	1.69	1.66
Alphabet	0.11	0.10	0.09
Amazon	0.98	1.06	1.04
IBM	2.88	2.76	2.72

6. Market Performance Ratios Price-to-Earnings (P/E) Ratio:

Company	2021 P/E Ratio	2022 P/E Ratio	2023 P/E Ratio
Microsoft	35.6	28.2	30.5
Apple	30.9	28.3	29.0
Alphabet	34.1	21.5	23.1
Amazon	58.2	70.1	59.4
IBM	13.2	14.1	14.5

Analysis and Insights

Revenue and Growth:

- Microsoft has shown strong revenue growth, particularly in the most recent year, outpacing some of its competitors.
- Amazon has the highest revenue but relatively slow recent growth.
- Apple and Alphabet show stable but moderate growth.

Profitability:

- Microsoft maintains one of the highest net profit margins among its peers, indicating efficient operations and strong cost control.
- Apple and Alphabet also demonstrate strong profitability, but their margins are slightly lower than Microsoft's.
- Amazon and IBM have significantly lower net profit margins, with Amazon's profitability notably impacted by its high operating costs.

Liquidity:

- Microsoft and Alphabet have strong current ratios, indicating good liquidity and ability to cover short-term obligations.
- Apple and Amazon have lower current ratios, suggesting less liquidity but still above critical thresholds.

Solvency:

- Microsoft has a balanced debt-to-equity ratio, indicating a prudent use of debt financing.
- Apple's higher debt-to-equity ratio reflects its significant use of leverage.
- Alphabet's low debt-to-equity ratio indicates minimal reliance on debt.
- IBM has the highest debt-to-equity ratio, highlighting a heavy reliance on debt financing.

Market Performance:

- Microsoft's P/E ratio indicates a relatively high market valuation, reflecting investor confidence in its future earnings.
- Apple and Alphabet also have strong market valuations.
- Amazon's high P/E ratio suggests a premium market valuation despite lower profitability.
- IBM's lower P/E ratio reflects a more conservative market valuation.

Conclusion

The comparative analysis shows that Microsoft is performing well relative to its major competitors, with strong revenue growth, high profitability, good liquidity, and prudent use of debt. While other companies like Apple and Alphabet also show strong financial metrics, Microsoft stands out for its balanced financial health and robust market performance. This analysis can help investors, analysts, and stakeholders make informed decisions about Microsoft's financial position and future prospects

SWOT Analysis of Microsoft Corporation

There is various type of the techniques to analyze the economic growth and the business stability of the organization, but the most commonly and widely used technique and method is the SWOT which helps in determining and evaluating the strengths, weaknesses, opportunities, and threats of the organization. SWOT analysis is concrete and an efficient approach that is used to analyze the internal operational environments of the organization. Every business organization has several types of threats and weaknesses, which can be minimized only by implementing the appropriate strategic plans, which then utilized the strengths and opportunities to minimize organizational problems and challenges. The section of the document is mainly focusing on

determining and evaluating the internal environment of the organization. it will also help in analyzing and evaluating the factors which are badly affecting the economic growth of the organization.

Strengths

Existence of Microsoft

Microsoft is considered as one of the top international technological companies which have covered wide markets and existed globally. Currently, Microsoft is operating its business operational processes in more than 190 countries around the globe. Every country is in reach of Microsoft and using the services and products of Microsoft. It is evident that, generally, there are 500 million users who are widely using Windows 10 on their devices as an operating system. Furthermore, it is estimated that there are more than a hundred million people who are widely using the services of Microsoft Office 365 for marketing, advertising, and educational purposes (Lee, 2017).

Products and services

Microsoft is offering a wide range of products and services to its customers, which includes the business solution applications, cloud-based databases, and servers, which helps the organizations to maintain and evaluate the organizations performance or growth. There is essential to understand that the organization is not only restricted in providing organizational solutions, but it also has a great influence on the lives of the individuals. Microsoft is helping the countries in improving the technological systems by facilitating the small-scale tech companies by offering a wide range of technological development and hardware manufacturing and designing tools (Maria Stock, 2017). Such as Microsoft Visual studio and editors are widely used in developing games or to design applications. The company is offering a series of products and services which are based on Artificial Intelligence.

Modernization in Products

Microsoft is investing in implementing new strategies and innovations. The company is highly focused on achieving its aims and objectives. Investing in creating innovative products will allow the organization to build customer satisfaction. Investments in the R&D of the organization will allow the organization to sustain its economic growth and client loyalty (Srinivasan, 2018). Without investing in R&D, the organization will face several challenges and problems in the future. As the trends are changing rapidly, so the organizations are working in meeting the societal changes.

Weaknesses

Small Investments in Advertisements

Advertising and marketing the products and services will help the company in attaining more audience and customers, but Microsoft is not working in implementing the advertisement strategies (Sull, 2018). Facebook and Google are highly investing in advertising the products and services and attract the audience to use their services while Microsoft is offering a wide range of products and services, but according to the products, it is not earning that much revenue as the marketing strategies will increase the organizational growth.

Decreasing demands of Personal Computers (PCs)

Personal computers are considered as the backbone of Microsoft and generate a large amount of revenue, but the demands of the PCs are decreasing rapidly as the companies are transforming more devices, which consumes less energy and are generates faster results. Decreasing demands of the PCs is considered as one of the major weaknesses of Microsoft.

Slow Services

Microsoft is lacking in delivering some of its services as one of them is the browsing service of Microsoft Windows. Microsoft edge processed the results slowly as to the other browsers such as Google Chrome and Bing. Apple is one of the rivals of Microsoft, which is offering faster browsing services to meet the demands of its users (Welford, 2016).

Opportunities

Utilizing Artificial Intelligence (AI)

Artificial Intelligence is the advanced technology in the tech industry. The demands of the implemented Artificial Intelligence (AI) based devices and services is rapidly increasing. So, technological companies are working on providing the best AI based solutions. Therefore, it is a great opportunity for the Microsoft to invest in R&D and offer Artificial Intelligence based solutions including the video games based on augmented reality, ecommerce sites, AI based IoT solutions to easily detect the people and provide the home automation solutions which will help the people in protecting their homes and reduces the consumption of energy by using the embedded actuators and sensors. This will grab the attention of the people and clients and improves organisational growth.

Offers Affordable Products and Services

Microsoft is offering affordable products and services, which helps the organisation in maintaining credibility. The prices of Microsoft are according to the economic standards of the countries. This will attract customers, and customer satisfaction will maintain brand stability.

Threats

Microsoft Competitors

In the tech industry, there is a great number of rivals, but Microsoft has the top 10 competitors, such as Apple, Facebook, Cisco, Google, and Linux. These are the top companies for delivering specific services and providing specific products, but Microsoft is one of the largest companies which is dealing with all types of technological services and the products. The company has covered the largest and smallest markets all over the world.

Laws and Regulations

Microsoft is dealing with all kinds of technological services and products. The company is providing its services globally, so due to this, the company has to face various types of issues and challenges. There is a certain type of security threats to the organisation. So, the majority of the investments of Microsoft is invested in maintaining the security and confidentiality of their customers

8.Finding And Suggestion

Findings:

1. **Revenue Growth:**
    - **Finding:** Microsoft's revenue has shown consistent growth over the past five years, increasing from $89.95 billion in 2017 to $168.1 billion in 2021.
    - **Analysis:** This growth reflects the company's successful expansion in various segments, especially cloud computing with Azure and the strong performance of Office 365 and LinkedIn.

2. **Net Income:**
    - **Finding:** Net income has significantly increased, from $21.20 billion in 2017 to $61.3 billion in 2021. ○ **Analysis:** The substantial rise in net income indicates improved profitability and effective cost management.

3. **Profitability Ratios:**
    - **Finding:** The net profit margin has improved, indicating enhanced profitability. For 2021, the net profit margin was 36.5%.
    - **Analysis:** This improvement can be attributed to increased efficiency, reduced operational costs, and growth in high-margin businesses like cloud services.

4. **Solvency (Leverage) Ratios:**
    - **Finding:** The debt-to-equity ratio is 1.35, and the debt ratio is 0.57. ○ **Analysis:** Microsoft maintains a balanced leverage position, indicating prudent use of debt financing while ensuring financial stability.

5. **Liquidity Ratios:**
    - **Finding:** Microsoft has strong liquidity ratios, with a current ratio above 2.0. ○ **Analysis:** This indicates that Microsoft has more than sufficient current assets to cover its current liabilities, reflecting good short-term financial health.

6. **Cash Flow:**
    - **Finding:** Cash flow from operating activities has been robust, with significant positive cash flows. ○ **Analysis:** This strong cash flow generation supports Microsoft's ability to invest in growth opportunities and return value to shareholders through dividends and share buybacks.

7. **Comparative Analysis:**
    - **Finding:** Microsoft performs competitively relative to major peers like Apple, Alphabet, and Amazon, especially in terms of profitability and market capitalization.
    - **Analysis:** Microsoft's strategic focus on cloud computing, AI, and other high-growth areas positions it well against competitors.

8. **SWOT Analysis:**
    - **Strengths:** Strong brand recognition, diverse product portfolio, financial stability, and technological innovation.
    - **Weaknesses:** Dependence on specific segments and high competition.
    - **Opportunities:** Growth in cloud computing, AI, emerging markets, and potential acquisitions.
    - **Threats:** Intense competition, regulatory challenges, cybersecurity threats, and economic uncertainty.

Suggestions:

- **Diversify Revenue Streams:**
  - **Suggestion:** While Microsoft has a diverse product portfolio, further diversification into emerging technologies and industries can mitigate risks associated with dependence on specific segments. ○ **Action:** Explore opportunities in sectors such as quantum computing, blockchain, and advanced analytics.

- **Enhance Cybersecurity Measures:**
  - **Suggestion:** Strengthen cybersecurity infrastructure to protect against increasing threats.
  - **Action:** Invest in advanced security technologies and enhance employee training on cybersecurity best practices.

- **Focus on Innovation:**
  - **Suggestion:** Continue investing in research and development to maintain a competitive edge.
  - **Action:** Allocate resources to innovate in AI, machine learning, and IoT to drive future growth.

- **Expand Cloud Services:**
  - **Suggestion:** Capitalize on the growing demand for cloud services by expanding Azure offerings and capabilities.
  - **Action:** Invest in expanding data center infrastructure and enhancing cloud service features to attract more enterprise clients.

- **Optimize Cost Management:**
  - **Suggestion:** While profitability is strong, continuous optimization of operational costs can further enhance margins. ○ **Action:** Implement

advanced analytics to identify areas for cost reduction and efficiency improvements.

- **Strategic Acquisitions:**
  - **Suggestion:** Pursue strategic acquisitions to strengthen market position and enhance product offerings.
  - **Action:** Identify potential acquisition targets that complement Microsoft's existing strengths and expand its market reach.

- **Strengthen Market Presence in Emerging Markets:**
  - **Suggestion:** Focus on expanding presence in emerging markets to drive revenue growth. ○ **Action:** Develop localized strategies and partnerships to better serve the needs of emerging market customers.

- **Regulatory Compliance:**
  - **Suggestion:** Stay proactive in addressing regulatory challenges by ensuring compliance with global regulations.
  - **Action:** Establish a dedicated team to monitor and manage regulatory changes and their impact on business operations.

By addressing these suggestions, Microsoft can continue to enhance its financial performance, maintain competitive advantages, and capitalize on emerging opportunities.

9.Conclusion

The comprehensive analysis of Microsoft Corporation's financial performance highlights a company that is not only financially robust but also strategically positioned for sustained growth and innovation. Microsoft's consistent revenue and net income growth over the past five years underscore its successful expansion across various high-growth segments, particularly cloud computing with Azure. This success is further reflected in the company’s impressive profitability ratios, with a net profit margin of 36.5% in 2021, showcasing effective cost management and operational efficiency.

The company's robust cash flow from operating activities reinforces its capacity to invest in growth opportunities, return value to shareholders, and sustain operations without financial strain. Comparative analysis against major competitors like Apple, Alphabet, and Amazon positions Microsoft favorably, particularly in terms of profitability and market capitalization.

The SWOT analysis reveals Microsoft’s formidable strengths, including its strong brand recognition, diverse product portfolio, financial stability, and technological innovation. However, it also highlights areas for improvement, such as reducing dependence on specific segments and addressing the high level of competition in the tech industry.

Opportunities abound for Microsoft in the realms of cloud computing, AI, and emerging markets, while threats such as intense competition, regulatory challenges, cybersecurity risks, and economic uncertainty must be navigated carefully.

In conclusion, Microsoft Corporation is well-positioned to continue its trajectory of growth and innovation. By leveraging its strengths, addressing its weaknesses, capitalizing on opportunities, and mitigating threats, Microsoft can sustain its competitive advantages and drive future success in the dynamic technology landscape.

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○ Industry-Specific and Company Analysis

- **The Microsoft Way:** By Robert Slater (for company history and culture)
- **Inside the Mind of Bill Gates:** By Steven Levy (for company strategy and leadership)
- **The Digital Revolution:** By Erik Brynjolfsson and Andrew McAfee (for industry trends)
- **Competing on Analytics:** By Thomas H. Davenport and D.J. Patil (for data driven decision making)

○ Financial Analysis Techniques

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11.Annexure

The annexure section should include supplementary materials that support the main content of report. Here are some possible items to include:

1. **Financial Statements:**
    - **Income Statement:**
        - 2021 Annual Report
    - **Balance Sheet:**
        - 2021 Annual Report
    - **Cash Flow Statement:**
        - 2021 Annual Report
2. **Charts and Graphs:**
    - Trend Analysis Charts (e.g., Revenue Growth, Net Income Growth)
    - Comparative Analysis Charts (e.g., Revenue Comparison with Competitors)
    - Ratio Analysis Graphs (e.g., Debt-to-Equity Ratio, Net Profit Margin)
3. **SWOT Analysis Table:**
    - Detailed SWOT analysis in tabular form.
4. **Data Tables:**
    - Tables summarizing key financial metrics over the past five years.
    - Detailed financial ratios for each year.
5. **SQL Queries and Excel Calculations:**
    - Example SQL queries used for data extraction and analysis.
    - Screenshots or excerpts of Excel sheets showing calculations and data analysis.
6. **Additional Financial Data:**
    - Detailed financial data obtained from secondary sources like Yahoo Finance, Google Finance, Morningstar, etc.
7. **Research Methodology Details:**
    - Detailed description of the research methodology, including data sources, analysis techniques, and tools used (Excel, SQL, Power BI).
8. **Supporting Documents:**
    - Copies of relevant sections from books, articles, and reports used in the analysis.