

# Financial Ratio Analysis of Apple Inc.: Assessing Performance and Efficiency

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**Abstract.** Apple Inc., a leading global technology company, has demonstrated remarkable success in effectively utilizing its assets and equity. This report conducts a financial ratio analysis using data obtained from the Securities and Exchange Commission for the years 2019 to 2022. The analysis reveals that Apple maintains a strong liquidity position, as indicated by consistently favourable current ratio, acid test ratio, and cash ratio. A positive trend is evident in the company's profitability ratios, which encompass gross profit margin, return on equity, and return on assets. This trend indicates efficient utilization of resources and generating attractive returns for shareholders. Furthermore, Apple showcases adept management of its receivables and inventory through its activity ratios, which serve as evidence of the company's efficiency in handling its receivables and inventory. The analysis also highlights Apple's prudent debt management approach, minimizing reliance on debt financing. Overall, these outcomes validate Apple's financial well-being and sound operational strategies, positioning the organization favourably for sustained growth and the creation of substantial value.

**Keywords:** Financial Ratio, profitability ratios, debt financing, debt management approach, receivables and inventory.

## 1. Introduction

### 1.1. Research background

Apple, a well-known technology company established by Steve Jobs in 1971, engages in the design, manufacturing, and sales of mobile communication devices, personal computers, accessories, and associated services [1]. The company also specializes in music players, network solutions, services, and third-party digital content. Throughout its journey, Apple has positioned itself as a dominant force in the mobile technology sector, driven by its exceptional product offerings and resilient global supply chains.

This report examines the financial ratios generated by Apple over the past four years, providing an analysis of the company's financial performance. Apple's operations are spread across four primary regions, and its product lineup encompasses devices like the iPhone, Apple Watch, Mac, Apple TV, and iPod, along with a suite of software applications.

### 1.2. Research methods and data sources

Evaluating a company's financial condition and operating results is pivotal, and financial analysis serves as a vital tool for this purpose. It involves the examination of financial indicators derived from financial reports, enabling a comprehensive assessment of the company's performance. It provides insights into the strengths, weaknesses, financial status, and development trends of the enterprise, offering valuable information for enhancing financial management and optimizing management decisions.

By examining historical data, financial analysis enables businesses to assess their debt-paying ability, profitability, operating capability, and growth potential. It facilitates the evaluation of operational performance, rewards favourable outcomes, and identifies areas for improvement. Ratio analysis and trend analysis methods are employed for vertical comparison, analysing Apple's financial situation and operating results from 2019 to 2022 in terms of debt-paying ability, profitability, operational capability, and growth potential.

This report utilizes financial data extracted from the Securities and Exchange Commission, focusing on Apple's income statement and balance sheet from the preceding four fiscal years. The data, denoted in millions, serves as the foundation for ratio analysis, enabling a comprehensive assessment of Apple's financial operations and liquidity position.

**Table 1.** Apple Financial Data (Securities and Exchange Commission)

Item/Year	2022 \$'m	2021 \$'m	2020 \$'m	2019 \$'m
Current Assets	135,405	134,836	143,713	162,819
Current Liabilities	153,982	125,481	105,392	105,718
Inventories	4,946	6,580	4,061	4,106
Cash and cash equivalents	23,646	34,940	38,016	48,844
Receivables	28,184	26,278	16,120	22,926
Total Assets	352,755	351,002	323,888	338,516
Total Liabilities	302,083	287,912	258,549	248,028
Total Shareholders' Equity	50,672	63,090	65,339	90,488
Sales	394,328	365,817	274,515	260,174
Cost of Sales	223,546	212,981	169,559	161,782
Net Income	99,803	94,680	57,411	55,256
Operating Cash Flow	122,151	104,038	80,674	69,391
Market Value	2,830,067	2,021,360	1,070,633	874,698

The financial data presented in Table 1 provides an overview of Apple's performance from 2019 to 2022. Several key conclusions can be drawn Apple continues to experience revenue growth, profitability, and market value expansion. Despite facing increasing liabilities, the company continues to demonstrate strong financial performance and remains an important player in the technology industry.

## 2. Financial ratio analysis overviews

### 2.1. Definition and classification of financial ratios

Quantitative metrics, known as financial ratios, serve as vital tools for evaluating a company's financial performance and overall fiscal health. They provide valuable insights across various operational aspects, including profitability, liquidity, efficiency, and market valuation. These ratios are categorized into liquidity, profitability, efficiency, and market valuation ratios, collectively offering a comprehensive picture of Apple's financial position.

### 2.2. Purpose and value of financial ratio analysis

Financial ratios are widely utilized by investors, managers, shareholders, customers, suppliers, competitors, and academics. These stakeholders are provided with valuable insights to facilitate their decision-making process concerning investment, lending, and strategic planning. The primary objective of ratio analysis is to support decision-making, as it helps identify areas of both positive and negative performance [2]. According to Fraser et al [3], by pinpointing strengths and weaknesses, ratios enable management to determine where further effort or operational changes are required. Additionally, ratios aid investors in making informed decisions about including Apple's stocks in their investment portfolios and allow for performance comparisons with other companies in the stock market.

Overall, financial ratio analysis is a valuable tool that plays a pivotal role in decision-making processes, facilitating effective actions and providing insightful evaluations of a company's performance. These actions may encompass diverse areas such as new investments, operational methodologies, or workforce adjustments, all aimed at enhancing the company's overall performance [4]. For Apple Inc., ratio analysis holds significance for investors worldwide in deciding whether to invest in the company and assessing its performance relative to other market players [5].

## 2.3. Selected financial ratio indicators and explanations

### 2.3.1 Liquidity analysis

(1) Current Ratio: Evaluates the company's liquidity, reflecting its ability to meet short-term obligations. A higher ratio indicates enhanced liquidity for the company, enhancing its capacity to fulfil financial commitments in the near term.

(2) Acid Test Ratio: Also referred to as the quick ratio, by excluding inventory, this ratio offers a more conservative approach to evaluating liquidity, providing a clearer picture of the company's immediate financial strength.

(3) Cash Ratio: By focusing solely on cash reserves, this ratio offers valuable insights into the company's immediate liquidity and cash position, offering a comprehensive assessment of its ability to respond to urgent financial needs.

### 2.3.2 Profitability analysis

(1) Gross Profit Margin: This ratio measures the efficiency of cost management and pricing capabilities by determining the percentage of revenue remaining after subtracting the cost of goods sold.

(2) Return on Equity (ROE): ROE assesses a company's profitability by calculating the returns generated on shareholders' equity. To obtain ROE, divide net income by shareholders' equity. A higher ROE implies more profitability per unit of equity investment, demonstrating efficient utilization of equity and improved profitability.

(3) Return on Assets (ROA): This ratio evaluates the effectiveness of a company's asset utilization in generating profit. A higher ROA signifies that the company generates more profit for each unit of assets, highlighting successful asset utilization and operational effectiveness.

### 2.3.3 Efficiency analysis

(1) Accounts Receivable Turnover: Evaluates the efficiency of a company's management of accounts receivable and gauges the speed at which payments are collected from customers.

(2) Equity turnover: Measures the effectiveness of the company's inventory management by analysing how frequently it sells and replenishes its inventory. This ratio offers valuable insights into the efficiency of the company's inventory control and sales processes.

(3) Asset Turnover: Evaluates the efficiency of the company's asset utilization by measuring the revenue generated per dollar of total assets.

### 2.3.4 Market valuation analysis

(1) Price-to-Earnings (P/E) Ratio: Juxtaposes a company's stock market price with its earnings per share, indicating the market's attitude towards a company's potential valuation.

(2) Price-to-Book (P/B) Ratio: Compares the market price of a company's stock to its book value per share, showing the market's assessment of the company's net asset value.

## 2.4. Summary

By analysing these selected financial ratio indicators, we can gain valuable insights into Apple's profitability, liquidity, operational efficiency, and market valuation. The financial metrics presented offer a holistic assessment of the company's performance and facilitate a thorough comprehension of its competitive strengths and vulnerabilities.

## 3. Liquidity analysis of Apple company

### 3.1. Current ratio

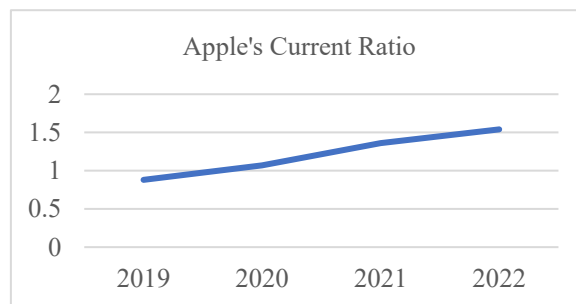
Current ratio is calculated using the following equation [6]:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Apple’s current ratio using the figures in table 1 is calculated as follows:

$$\begin{aligned} \text{Current Ratio 2022} &= \frac{135,405}{153,982} = 0.88 \\ \text{Current Ratio 2021} &= \frac{134,836}{125,481} = 1.07 \\ \text{Current Ratio 2020} &= \frac{143,713}{105,392} = 1.36 \\ \text{Current Ratio 2019} &= \frac{162,819}{105,718} = 1.54 \end{aligned}$$

The Figure 1 illustrates Apple's current ratios for the years 2019 to 2022:



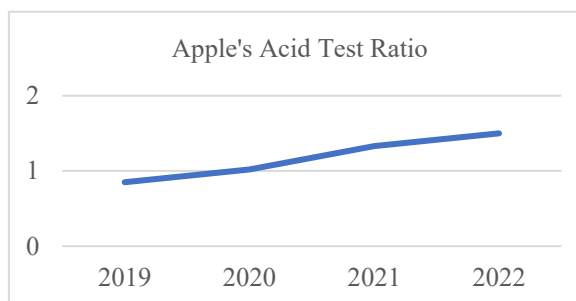
**Figure 1.** Current Ratio of Apple (Securities and Exchange Commission)

### 3.2. Acid test ratio

The calculation of the current ratio involves the use of the following equation [6]:

$$\text{Acid Test Ratio} = \frac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities}}$$

The Figure 2 displays the acid test ratios of Apple over the period 2019 to 2022:



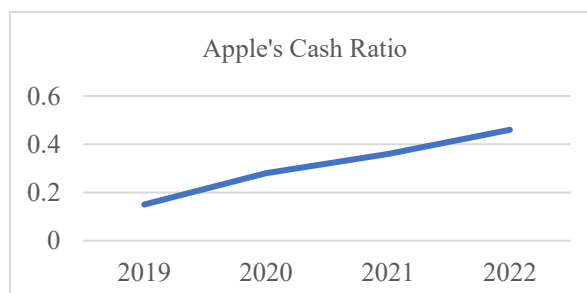
**Figure 2.** Acid Test Ratio of Apple (Securities and Exchange Commission)

### 3.3. Cash ratio

Calculate the cash ratio by applying the following formula [6]:

$$\text{Cash Ratio} = \frac{\text{Cash and Cash Equivalent}}{\text{Current Liabilities}}$$

Apple's cash ratios spanning from 2019 to 2022 are depicted in the Figure 3:



**Figure 3.** Cash Ratio of Apple (Securities and Exchange Commission)

### 3.4. Discussion on the liquidity ratios

The calculated data for the three liquidity ratios are all listed in Table 2 and will be analyzed:

**Table 2.** Liquidity Ratio of Apple (Securities and Exchange Commission)

Ratio/Year	2022	2021	2020	2019
Current ratio	0.88	1.07	1.36	1.54
Acid test ratio	0.85	1.02	1.33	1.50
Cash ratio	0.15	0.28	0.36	0.46

Apple's current ratio shows a downward trend from 2019 to 2022 in Table 2. In 2019, Apple's current ratio stood at 1.54, signifying its possession of \$1.54 in current assets for each dollar of current liabilities. However, this ratio gradually declined to 1.36 in 2020, 1.07 in 2021, and further decreased to 0.88 in 2022.

This downward trend suggests Apple's weakened capacity to meet short-term obligations. The figure under 1 in 2022 implies that Apple might encounter challenges in fulfilling its short-term obligations solely through its current assets. This could be a cause for concern for investors and creditors.

The acid test ratio excludes inventory from current assets due to its relatively lower liquidity compared to other assets. Similar to the current ratio, the acid test ratio for Apple has also experienced a declining trend from 2019 to 2022. In 2019, the acid test ratio was 1.50, which decreased to 1.33 in 2020, 1.02 in 2021, and further dropped to 0.85 in 2022. The declining ratios point to a reduction in the company's capacity to swiftly convert its highly liquid assets into cash, hindering its ability to fulfill short-term obligations promptly.

Moreover, Apple's cash ratio has exhibited a decreasing pattern over time. The cash ratio decreased from 0.46 in 2019 to 0.36 in 2020, 0.28 in 2021, and further declined to 0.15 in 2022. This indicates a decreasing level of cash reserves relative to short-term liabilities.

In conclusion, the decreasing liquidity ratios of Apple from 2019 to 2022 suggest a weakening ability to meet its short-term obligations. Close monitoring of the company's liquidity position is crucial for investors and creditors. A decrease in liquidity ratios could signal possible difficulties in meeting short-term financial obligations.

## 4. Profitability analysis of Apple company

### 4.1. Gross profit margin

The following equation is utilized to compute the gross profit margin [6]:

$$\text{Gross Profit Margin} = \frac{\text{Sales} - \text{Cost of Sales}}{\text{Net Sales}}$$

Apple's gross profit margin using the figures in table 1 is calculated as follows:

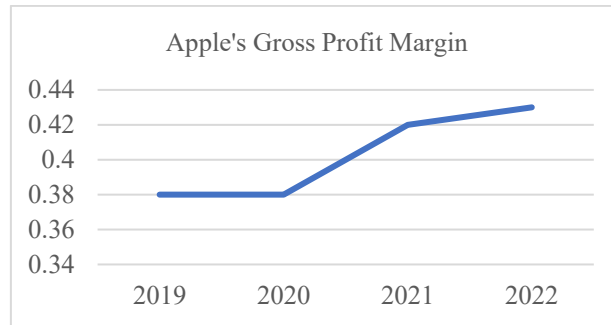
$$\text{Gross Profit Margin 2022} = \frac{397,328 - 223,546}{397,328} = 0.43$$

$$\text{Gross Profit Margin 2021} = \frac{365,817 - 212,981}{365,817} = 0.42$$

$$\text{Gross Profit Margin 2020} = \frac{274,515 - 169,559}{274,515} = 0.38$$

$$\text{Gross Profit Margin 2019} = \frac{260,174 - 161,782}{260,174} = 0.38$$

The Figure 4 showcases Apple's gross profit margin for the years 2019 through 2022:



**Figure 4.** Gross Profit Margin of Apple (Securities and Exchange Commission)

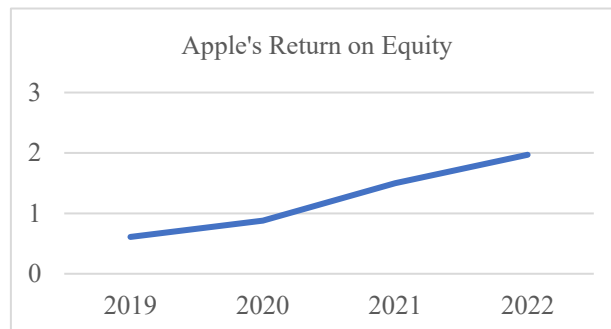
## 4.2. Return analysis

### 4.2.1 Return on equity

To determine return on equity, use the equation below (Damodaran and Aswath, 2007) [6]:

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Shareholder's Equity}}$$

The Figure 5 presents Apple's return on equity for the years 2019 to 2022:



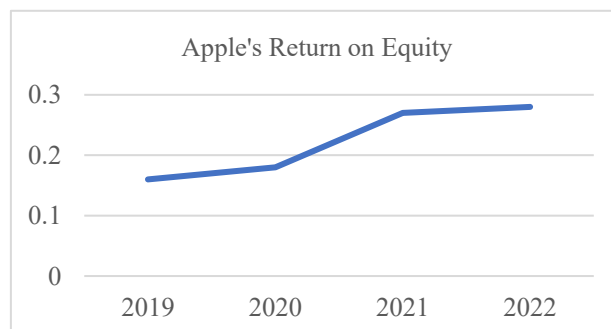
**Figure 5.** Return on Equity of Apple (Securities and Exchange Commission)

### 4.2.2 Return on assets

Calculate return on assets by applying the following formula [6]:

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Total Assets}}$$

Apple's return on assets is visualized in the Figure 6, covering the years 2019 to 2022:



**Figure 6.** Return on Assets of Apple (Securities and Exchange Commission)

## 4.3. Discussion on the profitability ratios

The calculated data for the three profitability ratios are all listed in Table 3 and will be analyzed:

**Table 3.** Profitability Ratio of Apple (Securities and Exchange Commission)

Ratio/Year	2022	2021	2020	2019
Gross profit margin	0.43	0.42	0.38	0.38
Return on equity	1.97	1.50	0.88	0.61
Return on assets	0.28	0.27	0.18	0.16

Given by Table 3, Apple's gross profit margin remained relatively stable during this period, ranging from 38% in 2019 and 2020 to 42% in 2021 and 43% in 2022. This indicates that Apple effectively managed its production and distribution costs, allowing it to retain a significant portion of its revenue.

The measure of return on equity assesses a company's profitability concerning the investment made by shareholders' equity. Apple's ROE increased from 61% in 2019 to 88% in 2020, demonstrating a strong ability to generate profits relative to its shareholders' investment. In 2021, the ROE further improved to 150% and continued to rise to 197% in 2022. This indicates that Apple efficiently utilized its equity to generate substantial returns for its shareholders.

The profitability of a company in relation to its total assets can be evaluated using the return on assets metric. Apple's ROA increased from 16% in 2019 to 18% in 2020, indicating a higher efficiency in generating profits from its assets. In 2021 and 2022, the ROA further improved to 27% and 28%, respectively, suggesting that Apple effectively utilized its assets to generate higher profits.

Overall, the profitability analysis demonstrates Apple's consistent ability to generate profits and deliver strong returns to its shareholders. The stable gross profit margin indicates efficient cost management, while the increasing ROE and ROA highlight the company's effective utilization of equity and assets. These trends suggest that Apple has maintained a solid financial performance and remains attractive to investors in terms of its profitability.

## 5. Operational efficiency analysis of Apple company

### 5.1. Accounts receivable turnover ratio

The calculation of accounts receivable turnover ratio involves the use of the following equation [6]:

$$\text{Accounts Receivable Turnover Ratio} = \frac{\text{Total Sales}}{\text{Average Receivables}}$$

To calculate the average receivables, simply add the opening receivables to the closing receivables, then divide the total by two. This method ensures an accurate representation of the average receivables over a given period. The following formulae provide further details on how to calculate average receivables in this case [8]:

$$\text{Average Receivables} = \frac{\text{Opening Receivables} + \text{Closing Receivables}}{2}$$

The average receivables for Apple are as follows:

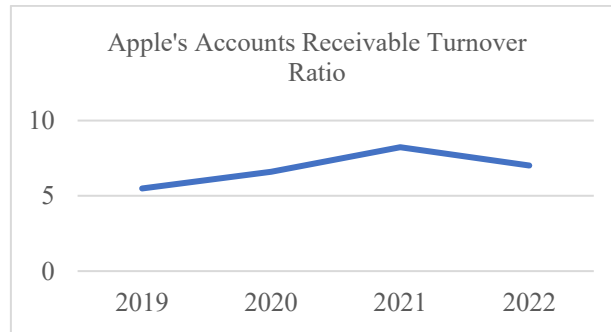
$$\text{Average Receivables 2022} = \frac{60,932 + 51,506}{2} = 56,219$$

$$\text{Average Receivables 2021} = \frac{51,506 + 37,445}{2} = 44,475.5$$

$$\text{Average Receivables 2020} = \frac{37,445 + 45,804}{2} = 41,624.5$$

$$\text{Average Receivables 2019} = \frac{45,804 + 48,995}{2} = 47,399.5$$

Figure 7 below illustrates Apple's receivable turnover over the four years:



**Figure 7.** Accounts Receivable Turnover of Apple (Securities and Exchange Commission)

### 5.2. Inventory turnover ratio

The following equation is utilized to compute inventory turnover ratio [6]:

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Sales}}{\text{Average Inventory}}$$

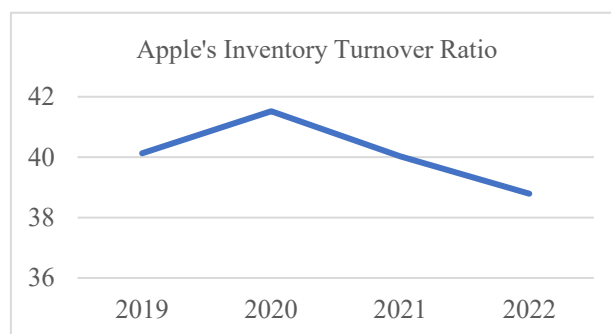
To calculate the average inventory, one must sum the inventory value at the beginning and end of the period and subsequently divide the total by two [9]. The subsequent formulas illustrate the step-by-step process for computing the average inventory:

$$\text{Average Inventory} = \frac{\text{Opening Inventory} + \text{Closing Inventory}}{2}$$

The average inventory for Apple is as follows:

$$\begin{aligned} \text{Average Inventory 2022} &= \frac{4,946 + 6,580}{2} = 5763 \\ \text{Average Inventory 2021} &= \frac{6,580 + 4,061}{2} = 5320.5 \\ \text{Average Inventory 2020} &= \frac{4,061 + 4,106}{2} = 4083.5 \\ \text{Average Inventory 2019} &= \frac{4,106 + 3,956}{2} = 4031 \end{aligned}$$

The Figure 8 provided below displays the inventory turnover ratios of Apple over the period 2019 to 2022:



**Figure 8.** Inventory Turnover of Apple (Securities and Exchange Commission)

### 5.3. Asset turnover ratio

Asset turnover ratio is calculated by using the following formula [6]:

$$\text{Assets Turnover Ratio} = \frac{\text{Total Sales}}{\text{Average Total Assets}}$$

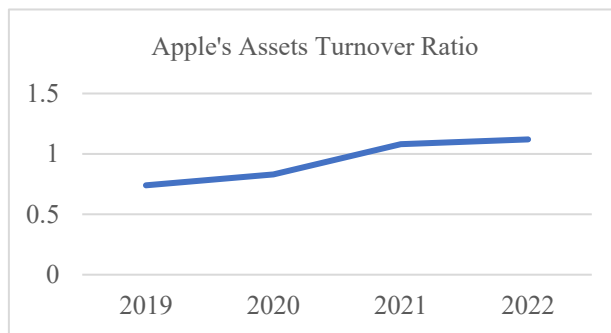
Average total assets, on the other hand, is calculated using the following formulae:

$$\text{Average Total Assets} = \frac{\text{Assets at the start of the year} + \text{Assets at Year End}}{2}$$

The following are the average total assets for Apple Inc.:

$$\begin{aligned} \text{Average Total Assets 2022} &= \frac{352,755 + 351,002}{2} = 351,878.5 \\ \text{Average Total Assets 2021} &= \frac{351,002 + 323,888}{2} = 337,445 \\ \text{Average Total Assets 2020} &= \frac{323,888 + 338,516}{2} = 331,202 \\ \text{Average Total Assets 2019} &= \frac{338,516 + 365,725}{2} = 352,120.5 \end{aligned}$$

Apple's asset turnover ratio spanning from 2019 to 2022 are depicted in the Figure 9:



**Figure 9.** Assets Turnover of Apple (Securities and Exchange Commission)

#### 5.4. Discussion on the operational efficiency ratios

The calculated data for the three operational efficiency ratios are all listed in Table 4 and will be analyzed:

**Table 4.** Operational Efficiency Ratios of Apple (Securities and Exchange Commission)

Ratio/Year	2022	2021	2020	2019
Accounts receivable turnover ratio	7.01	8.23	6.60	5.49
Inventory turnover ratio	38.79	40.03	41.52	40.13
Asset turnover ratio	1.12	1.08	0.83	0.74

From 2019 to 2022, Apple's accounts receivable turnover ratio increased from 5.49 to 7.01, which is showed in Table 4. This indicates that Apple improved its efficiency in collecting payments from customers over the years, suggesting better credit management and more effective collection processes.

The efficiency of Apple's inventory management is gauged by the inventory turnover ratio. A more substantial ratio indicates the company's adeptness at selling and restocking inventory promptly and effectively. From 2019 to 2022, Apple's inventory turnover ratio remained relatively stable, ranging from 40.13 to 38.79. Although there was a slight decline in the ratio, it still indicates that Apple manages its inventory efficiently, ensuring a healthy turnover of goods.

The efficiency of a company in generating revenue from its assets is measured by the asset turnover ratio. A higher ratio signifies improved effectiveness in utilizing assets to generate income. From 2019 to 2022, Apple's asset turnover ratio increased from 0.74 to 1.12. This indicates that Apple improved its efficiency in generating revenue from its assets over the years, implying effective utilization and optimization of its resources.

Overall, the operational efficiency analysis of Apple from 2019 to 2022 shows positive trends. The accounts receivable turnover ratio increased, indicating improved collection efficiency. The inventory turnover ratio remained stable, indicating effective inventory management. The asset turnover ratio increased, suggesting enhanced efficiency in generating revenue from assets. These ratios demonstrate Apple's ability to efficiently manage its operations and utilize its resources effectively, contributing to its overall operational efficiency and financial health.

## 6. Market valuation analysis of Apple company

### 6.1. P/E ratio

Calculate P/E ratio by applying the following formula [10]:

$$P/E \text{ Ratio} = \frac{\text{Market Value per Share}}{\text{Earnings per Share}} = \frac{\text{Market Value}}{\text{Retained Earnings}}$$

The Figure 10 showcases Apple's P/E ratios for the years 2019 through 2022:

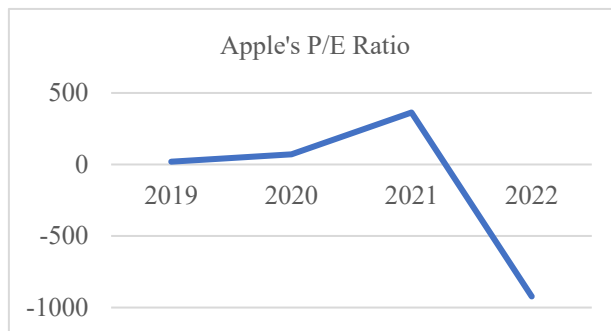


Figure 10. P/E Ratio of Apple (Securities and Exchange Commission)

### 6.2. Market to book ratio

The calculation of the market to book ratio involves the use of the following equation [11]:

$$\text{Market to Book Ratio} = \frac{\text{Market Value}}{\text{Book Value}}$$

Apple's market to book ratios are visualized in the Figure 11, covering the years 2019 to 2022:

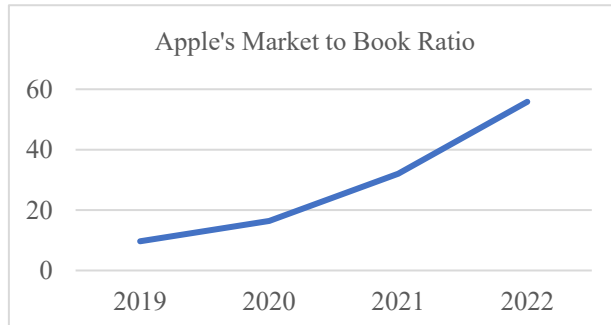


Figure 11. Market to Book Ratio of Apple (Securities and Exchange Commission)

### 6.3. Discussion on market valuation ratios

The calculated data for the two market valuation ratios are all listed in Table 5 and will be analyzed:

Table 5. Market Valuation Ratios of Apple (Securities and Exchange Commission)

Ratio/Year	2022	2021	2020	2019
P/E ratio	(922.45)	363.42	71.54	19.06
Market to book ratio	55.85	32.04	16.39	9.67

The market valuation analysis of Apple between 2019 and 2022 in Table 5 highlights notable fluctuations in both the P/E ratio and market to book ratio. The former serves as a gauge of the market's perception of the company's earnings and future growth potential, while the latter reflects the market's evaluation of Apple's assets in comparison to their book value.

In 2019, Apple's P/E ratio stood at 19.06, signifying that investors were willing to pay 19.06 times the company's earnings for its stock. This relatively moderate P/E ratio indicated a reasonable valuation based on earnings. Meanwhile, the market to book ratio recorded at 9.67, implying that the market valued Apple's assets at 9.67 times their book value.

In 2020, Apple's P/E ratio increased significantly to 71.54, signaling a higher premium placed on the company's earnings. This could be attributed to the strong performance of Apple's products, such as the iPhone and other devices. The market to book ratio also increased to 16.39, indicating that the market valued Apple's assets at a higher multiple compared to their book value.

In 2021, the P/E ratio for Apple skyrocketed to 363.42, reflecting the market's high expectations for the company's future earnings and growth potential. This significant increase in the P/E ratio indicated an optimistic outlook from investors. The market to book ratio also rose to 32.04, suggesting a substantial premium placed on Apple's assets compared to their book value.

In 2022, the P/E ratio for Apple turned negative, reaching -922.45. This negative P/E ratio can be attributed to various factors such as changes in market conditions, company performance, or investor sentiment. When the P/E ratio is negative, it signals that the company's earnings are in the red or that the market holds a pessimistic view of its future earnings prospects. The market to book ratio continued to rise to 55.85, indicating a significant premium placed on Apple's assets.

Overall, the analysis of Apple's market valuation from 2019 to 2021 demonstrates a significant upswing in the market's assessment of the company, evident through the overall ascending P/E ratio and market to book ratio. These ratios indicate a higher premium placed on Apple's earnings and assets, suggesting a positive market sentiment towards the company's growth prospects. However, the negative P/E ratio in 2022 indicates a potential shift in investor sentiment, warranting further investigation into the factors influencing the market valuation of Apple.

## **7. Limitations and challenges of Apple's financial ratio analysis**

### **7.1. Reliability and consistency of data**

One of the challenges in conducting a financial ratio analysis for Apple is ensuring the reliability and consistency of the data used. Financial ratios rely on accurate and consistent financial information. However, the quality and accuracy of financial data can vary, and inconsistencies in reporting practices across different periods or companies can affect the comparability of ratios. Therefore, it is essential to carefully review the financial statements and footnotes to understand the data sources and any adjustments made.

### **7.2. Limitations of ratio analysis**

Financial ratios offer valuable insights into a company's financial performance; however, they do come with certain limitations. Ratio analysis simplifies complex financial information into a few key indicators, which may overlook important nuances and details. Furthermore, ratios rely on historical data and might not fully encompass forthcoming developments or alterations in the business landscape. Consequently, forming a comprehensive comprehension of Apple's financial position and prospects requires the integration of ratio analysis with other qualitative and quantitative factors. Thus, it becomes crucial to consider a broader spectrum of indicators when evaluating the company's performance.

### **7.3. The impact of industry and market changes**

The interpretation of financial ratios should also consider the impact of industry and market changes on Apple's performance. Apple operates in a highly competitive and dynamic technology industry, which is subject to rapid technological advancements, changing consumer preferences, and evolving market conditions. These factors can significantly influence Apple's financial ratios. Factors such as new product launches, technological disruptions, regulatory changes, and economic conditions can impact Apple's financial performance and, consequently, the financial ratios. It is important to consider the broader industry and market dynamics when interpreting the financial ratios of Apple.

## **8. Conclusion and recommendations**

### **8.1. Overall evaluation of Apple's financial situation**

Based on the provided financial ratios, we can evaluate Apple's financial situation as follows:

#### **8.1.1 Liquidity**

Over the years, there has been a declining trend in Apple's liquidity position, which can be observed through the current ratio, acid test ratio, and cash ratio. Experiencing a decline from 1.54 in 2019 to 0.88 in 2022, the current ratio suggests a possible obstacle in fulfilling short-term liabilities. The acid test ratio and cash ratio have also declined, suggesting a decrease in Apple's ability to cover immediate liabilities with its most liquid assets.

#### **8.1.2 Profitability**

Over the years, Apple has displayed consistent performance in maintaining a stable gross profit margin. This stability underscores the company's adept cost management practices, demonstrating its unwavering capacity to generate profits from sales. Return on equity and return on assets have shown an increasing trend, indicating that Apple has been effective in utilizing its shareholders' equity and assets to generate returns.

#### **8.1.3 Efficiency**

Apple's accounts receivable turnover ratio and inventory turnover ratio have remained relatively stable, suggesting efficient management of accounts receivable and inventory. The asset turnover ratio has shown improvement, indicating better utilization of assets to generate sales.

#### **8.1.4 Market valuation**

The P/E ratio and market-to-book ratio reflect market expectations and investor sentiment towards Apple's stock. The P/E ratio has exhibited significant fluctuations, with a negative value in 2022. The market-to-book ratio has consistently remained above 1, indicating that the market values Apple's stock at a premium compared to its book value.

### **8.2. Suggestions and improvement directions based on financial ratio analysis**

#### **8.2.1 Enhance liquidity**

Apple should focus on improving its liquidity position by increasing current assets, such as cash and cash equivalents, and managing its short-term liabilities more effectively. This may involve implementing efficient working capital management practices and optimizing cash flow processes.

#### **8.2.2 Sustained profitability**

Apple should continue to prioritize maintaining a healthy gross profit margin and profitability ratios. This can be achieved by improving advertisement and marketing tactics, monitoring costs, improving distribution channels and so on [11].

#### **8.2.3 Operational efficiency**

Apple can further improve operational efficiency by closely managing accounts receivable and inventory turnover. Timely collection of receivables and effective inventory management practices can contribute to improved cash flow and cost optimization.

#### **8.2.4 Investor communication**

Given the fluctuations in the P/E ratio, Apple should focus on clear and transparent communication with investors to address any concerns and provide insights into the factors driving the market valuation of the company's stock.

### 8.2.5 Market analysis

Apple should conduct thorough market analysis to understand the changing dynamics of the technology industry, anticipate future trends, and adapt its strategies accordingly to maintain its competitive edge.

### References

- [1] Reuters.com. About Apple Inc (AAPL.O). July 12, 2023. Retrieved from: <https://www.reuters.com/companies/AAPL.O>. (2023).
- [2] T. Husain, N. Sunardi, *Fina Eco Rev* 2, 2 (2020).
- [3] L.M. Fraser, A. Ormiston, Boston: Pearson, (2016).
- [4] B. Wadhwa, *Fron J Accoun Bus Res* 1, 1 (2019).
- [5] I. Allad, *Inter J Res All Sub Multi Lang* 5, (2017).
- [6] A. M. Rashed, A. H. Nasser, S. Eissa, N. Haitham, *SSRN*, (2021).
- [7] D. Aswath, *SSRN*, (2007).
- [8] T. Purwanti, *Inter J Seoc*, (2019).
- [9] J. K. Kwak, *Proce* 7, 10 (2019).
- [10] Finance Management.com. Financial Analysis. June 1, July 12, 2023. Retrieved from: <https://efinancemanagement.com/financial-analysis/pe-ratio> (2023).
- [11] Finance Management.com. Financial Analysis. July 12, 2023. Retrieved from: <https://efinancemanagement.com/financial-analysis/market-to-book-ratio> (2023).
- [12] E. Wilson, *SSRN*, (2021).