

Analysis on Unusual Current Ratio of Apple Based on Annual Report 2017-2023

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Abstract. Apple, as the leading company of technology industry, plays a significant role on the manufacture and sale of electrical devices. Therefore, it is worth to analyze its financial situations. However, its most updated data of unusual current ratio has not been widely noticed. On one hand, its current ratio has dropped to less than 1 since March 2022, underlying its current asset is not adequate to cover up its current debt. On the other hand, its high profitability ratio shows Apple appears to be a fairly prosper firm and is nearly impossible to fall in the foreseeable future. This paper focuses on Apple's balance sheet and income sheet by using the method of collecting the data from Apple's financial report from 2017 to 2023 and then analyzing the correlation. The result of the research demonstrates that Apple is still considered safe despite its low liquidity and high risk since it has enormous cash and market securities to pay off its debt.

Keywords: Apple Inc.; current ratio; profitability ratio.

1. Introduction

Apple Inc. is a world-famous American multinational corporation which generates income by offering software products and providing financing and consulting services. Hence, the whole industry and the general public have been concentrating on its financial situation for decades. However, according to the data from 2022 annual report [1], its current ratio has unprecedentedly decreased to less than 1, while its return on equity ratio is still constantly increasing and its credit rating even improved from AA+ to AAA. Over the past few years, there are a number of articles focusing on Apple's yearly report from 2017 to 2021. The current ratio of Apple from 2017 to 2020 is between 1.28 and 1.36, which means its current debt can be repaid within one year out of its assets and it has no problem of financial health [2]. But its current ratio shows a negative sign in 2021, since it dropped to 1.075, illustrating that Apple is already not safe because 1.075 is much lower than 2 [3]. Despite fruitful research on these reports, few essays are related to Apple's 2022 report. It is vital to do the research since it brings new light on the liquidity issue. This paper mainly focuses on Apple's liquidity and solvency ratio, cash and cash equivalents derived from balance sheet, profit margin and return on equity calculated from income sheet to analyze why Apple does not encounter a financial crisis with a relatively low current ratio and high risk ratio.

2. Liquidity Ratio Analysis

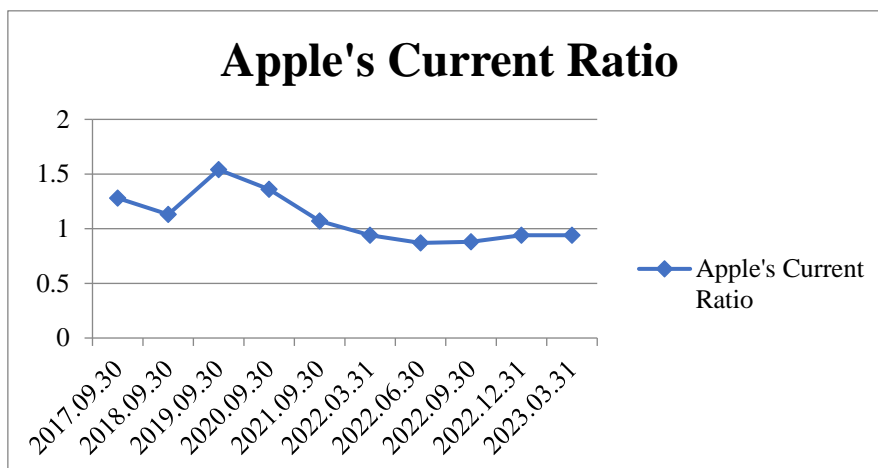


Fig. 1 Current Ratio of Apple 2017 to 2023 (from <https://www.macrotrends.net/stocks/charts/AAPL/apple/current-ratio>)

$$\text{Current Ratio} = \text{Current Asset} / \text{Current Liabilities.} \quad (1)$$

Current ratio determines whether a corporation can cover its liabilities which is due within one year. Figure 1 shows that Apple’s current ratio has been declining since 2020, and first became less than 1 on 2022.03.31. Then the trend maintained to the latest financial report (2023.03.31). Having a current ratio less than 1 means Apple’s current asset cannot pay off its current liabilities. However, current assets can be paid by cash and cash equivalents. Sunaryo and Lestari stated that the larger a company can fulfill its current asset, the stronger its cash position is [4]. Since Apple is the world’s largest cash machine, its enormous amount of cash and marketable securities are capable to offset the difference, which is demonstrated in cash analysis part.

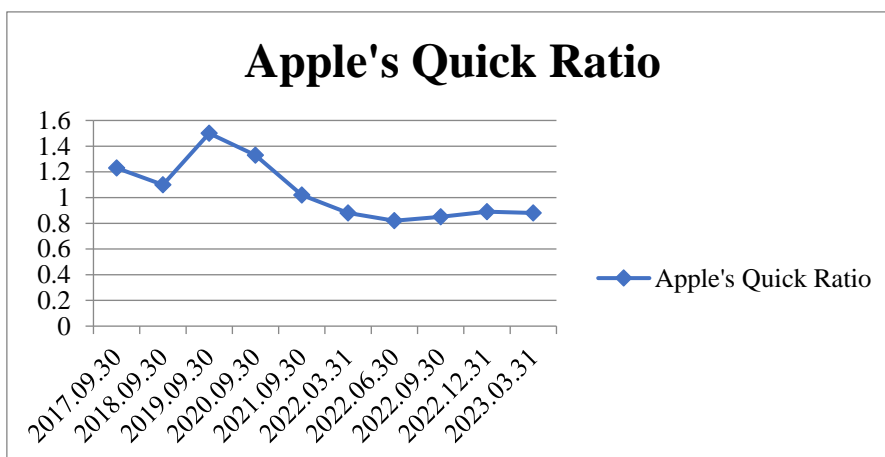


Fig. 2 Quick Ratio of Apple 2017 to 2023 (from <https://www.macrotrends.net/stocks/charts/AAPL/apple/quick-ratio>)

$$\text{Quick Ratio} = (\text{Current Asset} - \text{Inventory}) / \text{Current Liabilities.} \quad (2)$$

Quick ratio is a measurement of a company’s capability to instantly spend its near-cash assets. Figure 2 illustrates that from March 31st of 2022, the quick ratio of Apple has dropped to less than 1, while a quick ratio equal or more than 1 is usually considered good enough to pay its current debt without selling its inventory or obtaining additional financing. But that does not always mean corporations that have a low quick ratio are on the edge of bankruptcy. Girardin and Skowronski stated that Apple’s inventory (4946 m in Apple Inc. 2022 Report) has enough liquidity to fill in the gaps which are left by other current assets, so Apple does not need to concern its liquidity issue [5]. Therefore, those liquidity ratios demonstrate Apple has a relatively low but still controllable financial

health due to its tremendous amount of cash, far from its low current ratio and quick ratio impacting business negatively.

3. Solvency Ratio Analysis

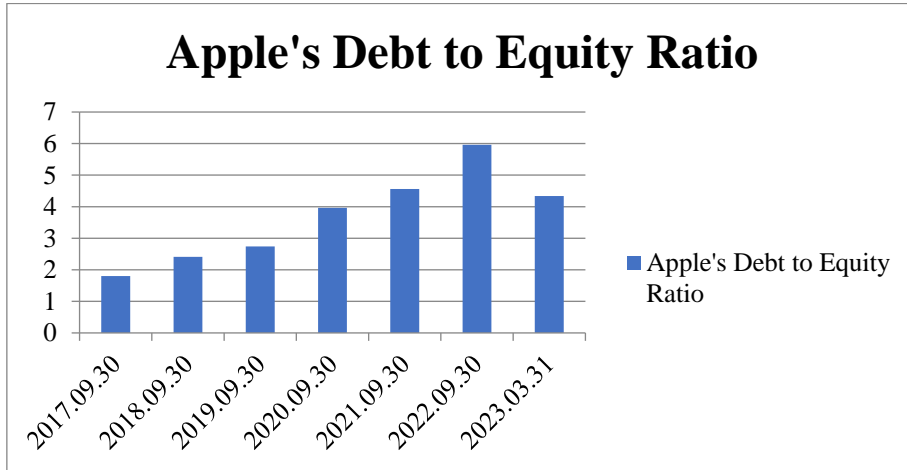


Fig. 3 Debt to Equity Ratio of Apple 2017 to 2023 (from <https://www.macrotrends.net/stocks/charts/AAPL/apple/debt-equity-ratio>)

$$\text{Debt to Equity Ratio (DE Ratio)} = \frac{\text{Total Debt}}{\text{Total Equity}} \quad (3)$$

DE ratio illustrates how much debt a company uses to keep running its business. As shown in Figure 3, Apple’s DE ratio in the past three years is between 4 and 6. RealVantage illustrates that in technology industry the normal range of DE ratio is approximately 0.5, so apparently Apple has surpassed it since 2017, underlying that it needs more fund to cover its liabilities [6]. High DE ratio usually means high risk for lenders and investors since the company borrows a number of funds to rise up its financial growth rate [7]. That indicates people might be discreet to invest Apple because of its high risk. However, since debt can stimulate the growth rate that would result in profitable return, some investors might treat Apple stock as a potential buy. Hence, because of strengthened cash Apple holds and high-risk-high-return consensus, it can immediately payoff the debt, giving investors courage and confidence to invest.

4. Profitability Ratios Analysis

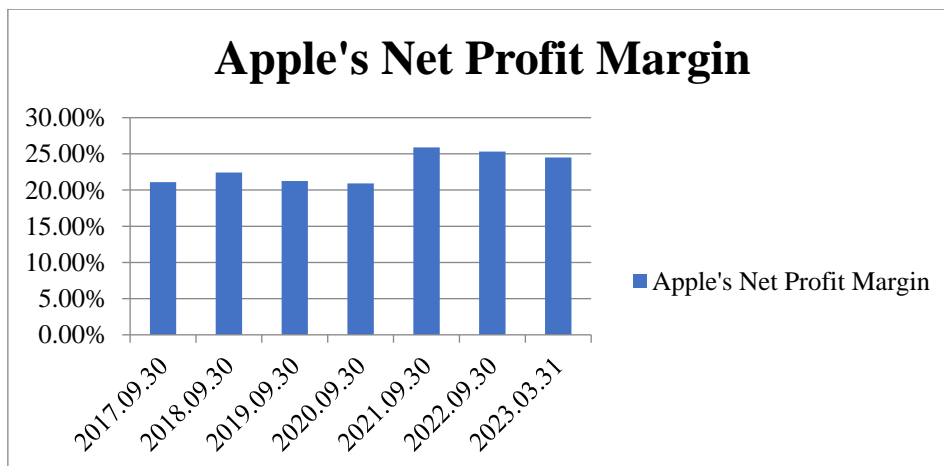


Fig. 4 Apple’s net profit margin 2017-2023 (from <https://www.macrotrends.net/stocks/charts/AAPL/apple/profit-margins>)

$$\text{Net Profit Margin} = \frac{\text{Net Income}}{\text{Sales}} \quad (4)$$

Net income is what a business possesses after deducting costs and taxes. Net profit margin mainly shows how much net income is turned into profit. Figure 4 shows that Apple has net profit margin that is above 20%, which is mainly caused by high product volume. According to the data from fullratio, the average percentage of profit margin in electronic components is 4%, the proportion of Apple should be considered outstandingly high [8]. Since high net profit margin shows high profitability, venture capital investors might attract Apple stock as they prefer to invest a stock with high profit margin when choosing a venture stock.

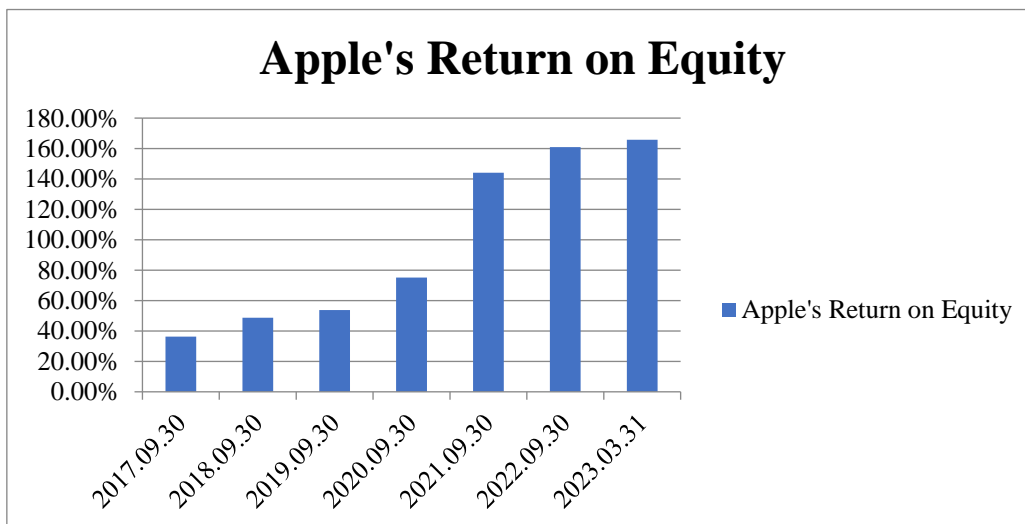


Fig. 5 Apple’s Return on Equity 2017-2023 (from <https://www.macrotrends.net/stocks/charts/AAPL/apple/roe>)

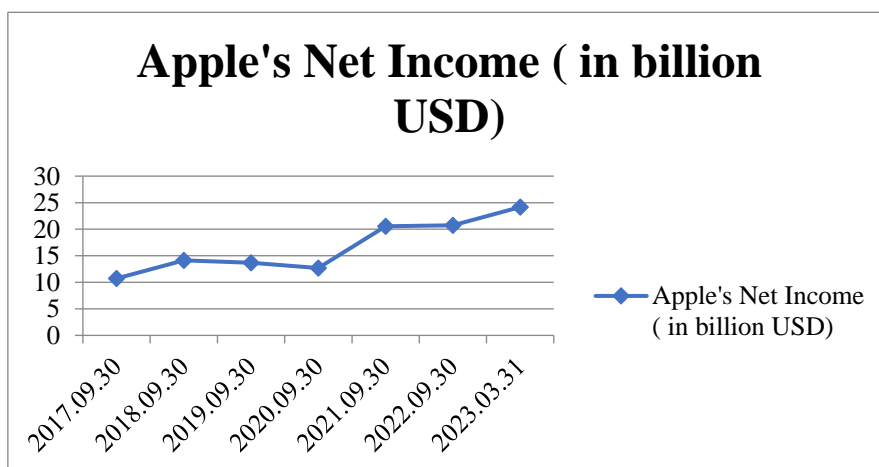


Fig. 6 Apple’s Net Income 2017 to 2023 (from <https://www.macrotrends.net/stocks/charts/AAPL/apple/net-income>)

$$\text{Return on Equity (ROE)} = \text{Net Income} / \text{Total Shareholder’s Equity}. \tag{5}$$

Total shareholder’s equity is the remaining value of asset minus liabilities. Return on Equity shows the performance of a company’s operating capital invested by shareholders. If the number is high, the company is considered to have efficient management at generating income and is also treated as a profitable company. Figure 5 shows that from 2017 to 2020, Apple’s ROE ratio increased gently, but it witnessed a dramatic growth from 2021 to the most recent fiscal quarter of 2023, which is mainly for service net sales. Figure 6 indicates Apple’s net income has also grown dramatically in 2021. Pereira pointed out that Apple has been ranking top of Fortune Global’s 500 list of profitable firms for seven years except 2019, meaning its financial situation is outstandingly stable compared with other major high-tech corporations [9]. Therefore, by observing the profitability ratios, Apple appears

to be fairly profitable and highly possible to keep its profitability trend regardless of its less than 1 current ratio and quick ratio.

5. Cash and Market Securities Analysis

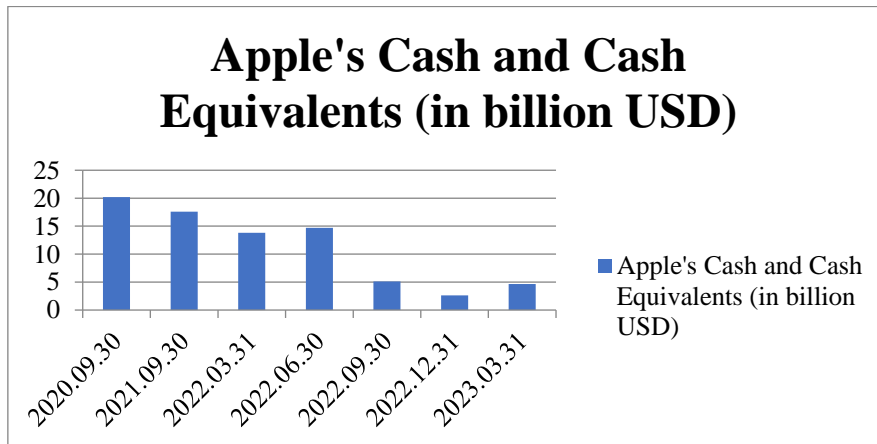


Fig. 7 Apple’s Cash on Hand 2017 to 2023 (from <https://www.macrotrends.net/stocks/charts/AAPL/apple/cash-on-hand>)

The amount of a firm’s assets that are cash or can be measured in cash within three months’ maturity is named cash and cash equivalents. Cash equivalents include marketable securities, which will be analyzed in Figure 9. From the data in Figure 7 there is a drastic fall about cash and cash equivalents in 2022, and the data maintained less than 5 billion USD to the latest quarter. It is worth to mention that if Apple does not possess plenty of cash and cash equivalents, it may have problem meeting its short-term liabilities, which would possibly have negative effect on its liquidity.

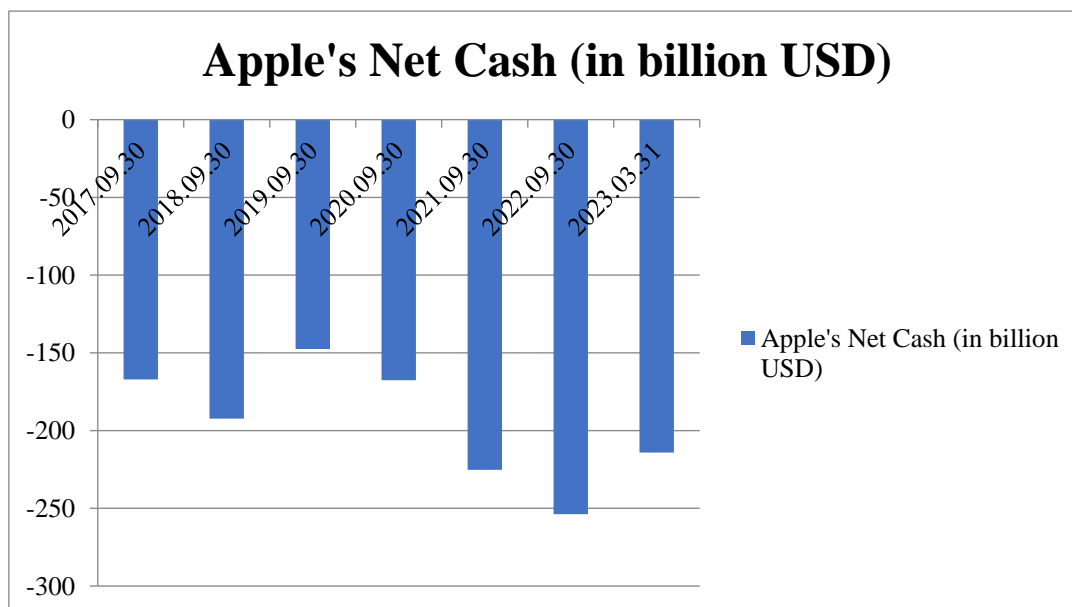


Fig. 8 Apple’s Net Cash 2017-2023 (from https://finbox.com/NASDAQGS:AAPL/explorer/cash_net/)

$$\text{Net Cash} = \text{Working Capital} - \text{Working Capital Requirements} = \text{Liquid Asset} - \text{Financial Debt} \quad (6)$$

Net cash, also named sight balance, is sums of money it can use in the short term. Figure 8 shows a steady decline in Apple’s net cash, meaning its working capital is not enough to cover the working capital requirements which will cause bank overdraft. It is also worth to mention that Apple’s net cash is below 0 from 2017, meaning its business has more outgoing than incoming money and Apple is not capable to cover expense from sales alone. Under these circumstances, Lenglet illustrated that

capital is needed for a company in three ways: short-term, consolidation loans, and abnormal growth in trade payables, which needs to be avoided [10]. He also emphasized that negative net cash should only be temporary or the company might have danger of bankruptcy. Bluesee Research even warned that Apple’s net cash position can only support for at most six quarters [11]. To solve the cash problem, the first action Apple’s management team did is to repurchase its stocks aiming to reach “cash neutral”, which appears to be effective since buybacks declined outstanding stock count by 40%. The buybacks increased the EPS (earnings per share) by 5.2% annually, which undoubtedly relieved Apple from its cash dilemma. The following step is to preserve cash from Apple’s video streaming businesses such as TV+. Since the investment for TV+ is anticipated to be at least \$15 billion per year (20% of net income), Apple will lose free cash flows which would stimulate buybacks [11]. In addition, Apple stock owners have enormous beneficiary. Ward illustrated that shareholders have been returned \$732 billion through share buybacks and dividends for a decade [12]. From the same time period Apple’s stock price has rocketed by 952%, meaning a tremendous demand for investment. Abhinav Davuluri, a Morningstar equity and credit strategist predicted that it will take years for Apple to reach its cash-neutral goal except it acquires a large company by cash. However, it rarely happens because Apple prefers to strengthen itself instead of merging other firms.

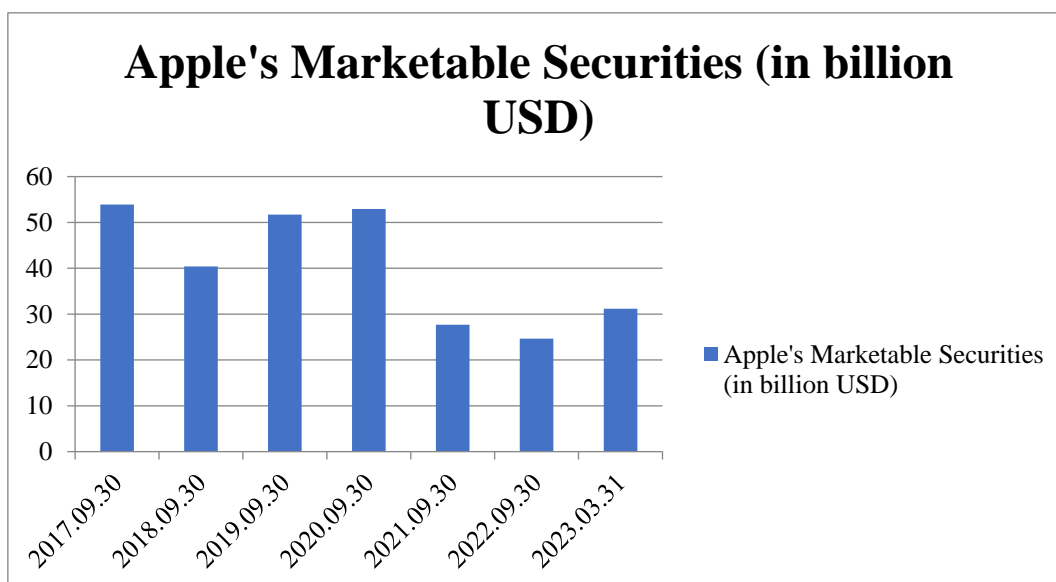


Fig. 9 Apple’s Marketable Securities 2017 to 2023 (from Apple Inc. 10-K 2017 to 2022 and 10-Q published on 2023.05.05)

Marketable securities are investments that can be quickly and easily turned into cash. As shown in Figure 9, the amount was between 40B to 50B from 2017 to 2020, while it decreased to 20B to 31B in recent years, which is caused by share repurchase designated by Apple in 2018 to reach cash neutrality. As mentioned above, stock buybacks will trigger EPS, hence it is normal practice to have a relatively low marketable securities. Therefore, although Apple has a cash issue, it would highly unlikely deteriorate because it has several methods to cope with and the general public is still fairly confident about its stock.

6. Conclusion

Based on the data analysis demonstrated above, although Apple has a low current ratio, quick ratio and high DE ratio, it will continue developing with limited danger because of its strong cash positions and extremely high return on equity. For the foreseeable future, Apple will reach cash-neutral goal in a few years and gain more profitability than it was.

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