

# Investment risk analysis for Apple Stock

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**Abstract.** The essay mainly research what extent the shortage of chips influences on Apple stock, analysis the advantages of Apple operation and strategy and the issues of Apple facing. Relevant literature will be reviewed and assumption will be mentioned in this essay in order to examine to whether Apple stock is worth to invest.

**Keywords:** Apple stock; risk analysis; Investment

## 1. The strength of Apple's stock

Trends in inflation are increasingly being influenced by chips: in recent decades, western deflation was encouraged by drops in the price of chips made in Asia and low-cost manufacturing (Tett, 2022). Currently, because of problems with the supply chain, that dynamic has reversed. Moreover, the need for chips is increasing since they are essential to practically every modern industrial sector. However, over the past year, Apple has proven its strength in supply chains in dealing with global supply chain disruptions and Apple's control over suppliers ensures the company's vast supply capacity as well. As Apple's CEO, Tim Cook secured exclusive supply of tens of millions of cutting-edge components and constructed the complex supply network, which not only helps the company stay ahead of the competition but also lowers the expenses associated with research and development (Webb, 2021). Apple is now Taiwan Semiconductor Manufacturing's (TSM) biggest customer and their relationship deepened as Apple used TSMC's advanced packaging technology to develop its UltraFusion architecture (Ruehl, Kawase and Kynge, 2021). Therefore, Apple has made its production possible by introducing the latest M1 Ultra SoC in its latest MacStudio product and engineers at TSMC and Apple also work closely together because each company relies heavily on the other for its success (Ruehl, Kawase and Kynge, 2021). Thus, it can rest assured that the strong relationship with TSMC is advantageous for Apple.

Additionally, Apple also has a strong ability to integrate hardware and software. Apple's Silicon Engineering Group, which is also a leading chip designer, has been a big help in keeping Apple away from Intel in the chip space, giving the company a huge advantage in customizing its own chips and expanding its offerings through multiple permutations. Apple's CEO, Tim Cook, stated that every quarter since Apple started producing M1-based Macs has been record-breaking, and during this time, Apple has exceeded the industry growth (McGee, 2022). By vertical integration ability in hardware and software to apple and iOS ecosystem and combining ability on silicon chips, it is thought that the moat of apple is unique in the software strength, silicon chips and consumer ecological system's dominant position. Furthermore, Apple's entry-level phone is a price-balancing manoeuvre designed to entice Android users without driving away potential customers from higher-margin iPhone sales (McGee, 2022). According to Creative Strategies researcher Carolina Milanese (2022), the business is successful in segmenting the market and customers now have a choice and don't need to peer over the fence to see what is offered on the Android side. Therefore, pricing techniques that will encourage an almost co-dependent relationship between hardware and services will become more common as services start to account for a larger portion of Apple's income.

## 2. The weakness of Apple's stock

However, issues exist with Apple's shares. Firstly, Apple's appeal as a growth company may be harmed by slower hardware revenue growth. In the past, Apple's biggest competitive advantage was its ability to combine product innovation and excellent execution into a consistent flow of cash resources. For example, when the iPhone was introduced 15 years ago, it was an epoch-making

product that continued to bring in a lot of revenue for Apple (Apple: iPhone bump supports buyback boom, 2022). However, in recent years, Apple has not introduced any notable innovative products to the market, so it runs the risk of the slowdown getting worse in light of the fact that Apple's revenue growth has slowed down, especially for important items like the iPhone. Apple's iPhone sales accounted for \$50.6 billion, or 52% of total sales, in Q2 '22, an increase of just 5.5% (Apple, 2022). Apple's fastest growing product category is no longer the iPhone. The majority of Apple's revenue now comes from software services, surpassing hardware sales. Software services revenue increased year over year by 17.3% in just Q2 of 22 (Apple, 2022). Sales of advertising, AppleCare, cloud storage, digital content, payments, and other services are a few of them. Apple's hardware revenue (iPhones, Macs, iPads, and wearables) increased just 6.6% year over year in the second quarter, which is far slower than the 61.6% rise observed in the same quarter last year (Apple, 2022). Wall Street has reduced its expectations for Apple's future growth due to the weak revenue forecast and slowing growth in hardware revenue. Given Apple's historical growth rates, Wall Street predicts yearly growth of just 5.5% through the fiscal 2026 period, which is a major disappointment.

Second, rising downside risk is implied by P/E ratios and valuations. This is especially true given Apple's relatively high price-to-earnings ratio compared to other FAANG stocks (Facebook, Apple, Amazon, Netflix and Google), which is the second highest price-to-earnings ratio among FAANG stocks after Amazon. The poorest future earnings-per-share growth is also present. Apple's stock is pricey at 23.5 times earnings. Estimates for earnings per share have also fallen precipitously, with Wall Street projecting only a 5.4% average annual growth in earnings through the fiscal 2026 year. The recession may also result in weaker profits per share growth projections and compel Apple to look for other revenue-generating opportunities.

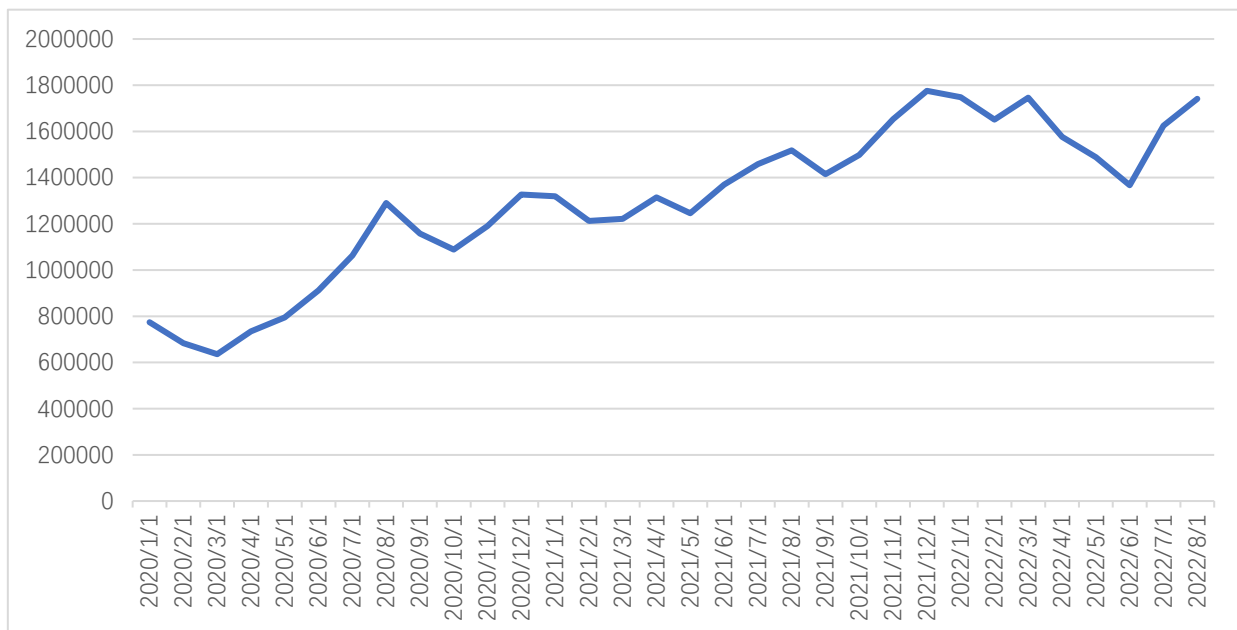
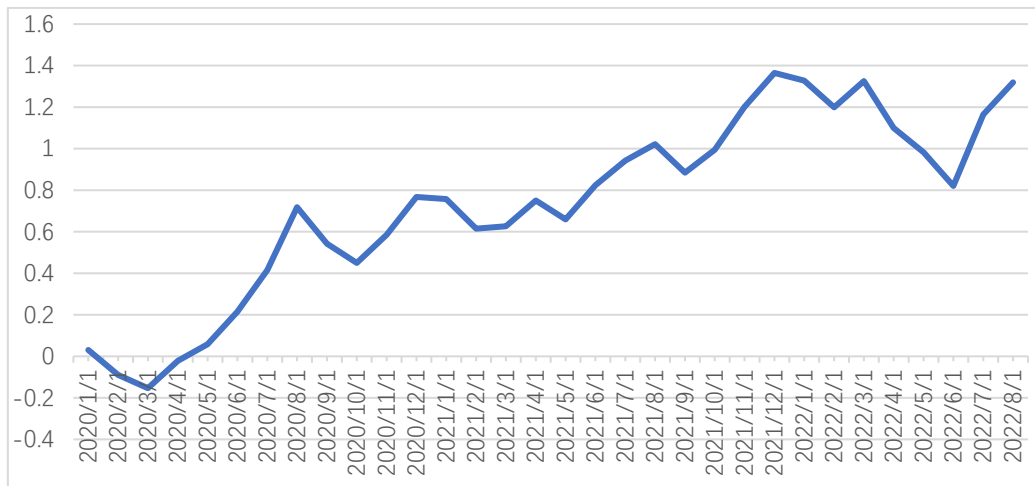


Fig. 1 Monthly value of the assumed investment



**Fig. 2** Monthly return of the assumed investment

Thirdly, shareholders no longer value buybacks as highly. There is a chance of a negative trend because the stock price has peaked. Investors will have to consider the possibility of a long-term downward trend given the cumulative increase of tens of thousands of times since the listing, the accumulation of numerous profits, and the stock price peak. Assume today is August 1st 2022 and on January 2nd 2020 you purchase 10,000 shares of Apple computer (AAPL), then the size of the initial investment is \$750,900. As a result, the return on the investment is 115.09% and annual return on the investment is 43.58%. The above two plots present the information about monthly value of the assumed investment and monthly return of the assumed investment. In both tables, the investment value and return significantly increased between January 2020 and August 2020, steadily risen between September 2020 and March 2022 while the maximum return appears on December 2021, then reduced considerably between April 2022 and June 2022 before recovering in July. Therefore, the plots demonstrate that growth in investment returns gradually slowed and even reversed between March and June 2022. One of the reasons many investors purchase Apple stock is that the company has a history of giving significant sums of money back to shareholders in the form of share buybacks. Apple's \$51.5 billion in cash, cash equivalents and marketable securities, demonstrating the viability of its buybacks (Tech stocks: record buybacks cannot stop market sell-off, 2022). However, a weak earnings season has not been offset by buybacks. If Apple's growth prospects continue to worsen, buybacks might no longer be sufficient to pique investors' enthusiasm in the stock. Buybacks are significantly less valuable to investors when a company's stock price is at an all-time high and growth in its core business is rapidly declining. Over the previous five years, Apple's outstanding shares have decreased by 21%. Apple may continue to repurchase \$20 billion worth of its shares over the coming years, but this won't change the reality that the company's stock is currently too costly in terms of price to profits, making it less valuable to shareholders. Second, despite more buybacks, Apple's growth has drastically slowed, which cannot be concealed. In comparison to the same period last year, Apple's June quarter is predicted to appear very subdued. Analysts predict that the producer of the iPhone would generate \$82.5 billion in revenue, just 1.4% more than the year prior, when revenues increased by 36% (Duguid, Romei and McGee, 2022). Currently, a protracted slowdown in hardware-related revenue growth poses the biggest threat to Apple and could make the business an unappealing growth stock. Another danger is that Apple's revenue growth from software services may not yet be sufficient to offset its slower revenue growth from hardware. Even with its rapid expansion, the software services sector is still very tiny, so even a strong performance will only marginally slow Apple's rate of overall revenue growth. In addition, President of the United States Joe Biden has expressed opposition to share buybacks, suggesting a 1% tax and a ban on executives selling stock following buybacks (Tech stocks: record buybacks cannot stop market sell-off, 2022).

### 3. Conclusion

In conclusion, investors are anticipating a sharp slowdown in earnings across the industry, following a selloff in technology stocks in the first half of the year, including industry giant Apple, because performance had been falling short of investors' expectations and the impact of the chip shortage on the industry. Even though Apple's growth slowed, some investors expressed confidence in the company's capacity to weather the uncertain economy, and they are also resorting to the options market to make bets on tech equities (Banerji, 2022). In addition, despite short-term hurdles, some experts think the argument for investing in tech equities is strong in the long run since the fundamental changes driving tech adoption are still in place (Flood, 2022). Nevertheless, as was already noted, Apple has a stronghold on its suppliers, so it's possible that the chip shortage won't effect the company. According to Jonathan Curtis, the tech sector's current valuation premium is not excessive and reflects the industry's margin growth over the past 12 years, rising recurring revenue levels, and strong long-term growth drivers. Tech stocks are still trading at a premium to the US stock market, but this premium is justified by the sector's superior fundamentals (Flood, 2022).

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