### Basic Information

Apple Inc. or Apple (ticker AAPL, publicly traded on NASDAQ exchange) is a technology company that designs, manufactures and markets a variety of consumer electronics. Their products consist of smartphones, personal computers, tablets, wearable devices, electronic accessories and a host of services to compliment the customer’s experience with their products. Apple is a member of the information technology sector. As of February 13th 2025 the stock price is $241.91. I am recommending a rating of sell as the stock is overvalued, however Apple being the behemoth that it is, holding the stock should see adequate returns over the long term as Apple continues to generate revenue through elite branding and technological innovations.

### Business Overview

Apple is a consumer electronics company. Based out of Cupertino, California, Apple is known to produce personal electronics ranging from smartphones, tablets and computers. They have a variety of complimentary products such as headphones, speakers and accessories. In addition to hardware production, Apple also develops their own software for these product lines. They have developed their own operating systems named after their respective products (e.g. iOS for iPhone, macOS for Macs, etc.). In addition to tangible goods, Apple also offers their customers services to compliment their products. Some services are standalone and do not require the consumer to have an existing Apple product to leverage. Services include the repair and replacement of products, online data storage, digital content (App Store, Apple TV), payment services and advertising platforms.

Apple’s main source of revenue comes from their iPhone product. It’s responsible for approximately 51% of their net sales. Their next largest revenue source comes from their services at around 25%, with the sales of Macs, iPads and wearables and accessories rounding out at 24%. Apple’s net sales for 2024 was approximately $391 billion. Their primary source of expenses is the cost of sales at approximately $181 billion. This is related to the complexity of Apple’s global supply chain and the sheer volume of sales related to their iPhone product. Over the past 10 years smartphones have become exponentially more complex and require thousands of components to be assembled into the final product. This alongside Apple utilizing custom components which can only be acquired through a limited number of suppliers will also drive up the COGS related to the iPhone. Apple has not reported any explicit breakdown of COGS related to iPhone, the assumption is made based on available market data.

Key drivers for success has been their continuous ability to innovate and provide a cohesive ecosystem of products that synergize with each other. This ecosystem offering was the first of its kind and has still yet to be challenged by any company in the consumer electronics industry. Over time the brand gained widespread popularity and their products are priced at a premium relative to their competitors; consumers choosing to buy from Apple from a personal preference standpoint versus a cost and functionality standpoint. The ecosystem of Apple is a great feature of combining their products, but many services and alternatives exist for people looking for more cost-effective products. Looking to the future, Apple’s next key driver for their business will be their services offerings. From 2023 to 2024 their net sales of services increased by 13%. Digital services can offer low operating expenses, high customer satisfaction and maintain competitive positioning if executed correctly.

### Industry Overview and Competitive Positioning

The global consumer electronics market size was valued at $1,214 billion in 2024 and is expected to grow at a CAGR of 6.6% into 2030 ([Grand View Research](https://www.grandviewresearch.com/industry-analysis/personal-consumer-electronics-market#:~:text=Consumer%20Electronics%20Market%20Size%20%26%20Trends,6.6%25%20from%202025%20to%202030.)). The industry is driven by several key factors such as technological advancements, rising disposable incomes and increasing demand for quality electronics. The digital age of e-commerce has also provided consumers with a myriad of ways to research and purchase products with ease. Direct sales channels still dominate the market for its ability to provide personalized services and allowing the customer to interact with the product directly before buying. Smartphones held the largest segment in this market share due to the increased dependence humans have on them for communication, entertainment, productivity, etc. North America holds the major market revenue share at 20%.

The consumer electronics industry is highly competitive, resulting in short product lifecycles, evolving industry standards, continual improvement in product pricing and performance and rapid adoption of new technology by competitors. Apple, offering a wide range of products and services, faces strong competition from multiple companies across individual markets. Samsung: a dominant player in smartphones, Microsoft: PCs and windows offer great alternatives for computing needs, Google: pioneer in web based services, Amazon: streaming services and smart home devices, Spotify: monopoly in music streaming industry and the widely accepted superior to Apple Music. There is no shortage of players seeking to take a slice of Apple’s pie, yet Apple has still managed to remain a competitive figure across all its product lines. The secret to success is Apple’s ability to create flawless user experiences and position these unique experiences as superior relative to the alternative. Add in Apple’s branding and we begin to understand why the demand for Apple products has skyrocketed over the past 15 years.

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| Metrics | Samsung | Microsoft | Google | Amazon | Spotify |
| Market Capitalization (USD Billions) | 271.74 | 3,003 | 2,000 | 2,050 | 119.39 |
| P/E Ratio | 12.39 | 31.17 | 22.51 | 37.65 | 101.11 |
| Debt to Equity Ratio | 0.05 | 0.13 | 0.03 | 0.18 | 0 |
| Preferred Stock | - | - | - | - | - |
| Retained Earnings Growth | - | - | - | - | - |

Other factors related to the competitive landscape Apple faces are the bargaining power of buyers, bargaining power of suppliers and industry competition. Some custom components that they use are obtained from a single or limited number of suppliers. If a negative or adverse event were to affect the region which manufacturing takes place, Apple would need to find an alternative solution. This could be costly and delay their production of products. Bargaining power of buyers and industry competition are both related to the alternative options for Apple’s products. Samsung Galaxy or iPhone? Apple TV or Amazon Prime Video? Apple mitigates this by being one of the best at continuous innovation and building brand loyalty. All of the mentioned technology companies spend significant amounts on R&D and Apple is no exception. In order to maintain their position as well as their reputation for great products and experiences, they will need to continue innovating.

### Investment Summary

#### P/E Ratio

Using the Earnings per Share metric from Apple’s 10-K ($6.11) and the Market Value per Share closing price as of February 18th ($244.47 USD), we calculate Apple’s P/E Ratio to be 40x. This is considered an all-time high P/E Ratio for Apple. It has not reached 40x since 2020. With revenue being at all time high, this may indicate the stock’s price is overvalued.

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| **Ticker Symbol** | **P/E Ratio** |
| AAPL | 40x |
| GOOGL | 22x |
| MSFT | 32x |
| Samsung Electronics (005930) | 11x |

\*P/E Ratios sourced from Morningstar.

#### Beta

Apple’s Beta was calculated to be 1.26, indicating a volatile stock relative to the S&P 500 index. This was calculated using 3 years of historical data at monthly intervals.

#### EV / EBITDA

Apple’s Enterprise Multiple was calculated to be 31x. Compared to competitors such as Samsung and Google with Enterprise Multiples of 4x and 16x respectively, this may indicate that Apple’s stock price may be overvalued.

#### FCF Yield

Apple’s FCF Yield was calculated to be 2.94%. Given Apple’s exemplary financial health and strong cash generation, its FCF Yield is lower than expected. Aligning with previous valuations and indications of the stock price being overvalued.

#### Recommended Action

We recommend to sell Apple’s stock. It is overvalued and a volatile stock. Any substantial changes to the general market or to the technology sector could garner substantial losses. Selling would allow investors to move money into better investment opportunities or have the cash on hand to purchase Apple at a more reasonable price.

### Investment Risk

The main risks to Apple relate to its dependence on iPhone sales for revenue and its foreign manufacturing being subject to ongoing geopolitical events,

### Environmental, Social and Governance

Apple has goal (coined Apple 2030) to be carbon neutral by the year 2030. Since 2015 they have reduced carbon emissions by 55% and continued to find innovative ways to reduce their environmental impact. The majority of Apple’s emissions comes from manufacturing, electricity and transportation. Manufacturing is the largest emission source of the 3 by a significant margin. Apple’s plan to reduce their emission comes from number of initiatives. Using recycled materials in their hardware and its components, improving the energy efficiency of their products, offsetting their emissions through nature sequestration and sourcing renewable energy in their operations facilities. Apple outputted 15,600,000 metric tons of CO2 in 2023. A 23% decrease from the previous year. Challenges with reaching the Apple 2030 goal includes sourcing recycled materials and regulatory barriers about using them in their products.