## Consumer Electronics and Software Services

## An Apple a Day May Keep Financial Woes at Bay: An Analysis of Apple Inc.'s Financial Performance and Growth Prospects



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## Company Overview

Apple Inc. (AAPL) is a prominent multinational technology corporation based in Cupertino, California. Established in 1976 by Steve Jobs, Steve Wozniak, and Ronald Wayne, the company is presently headed by CEO Tim Cook, who took over the role in 2011 after serving as Apple's Chief Operating Officer under Jobs.

The company specializes in the design, development, and sale of consumer electronics, computer software, and online services. Its range of products includes smartphones, tablets, personal computers, portable and wearable devices, software and associated services, accessories, and digital content and applications from third parties. Apple is recognized for its popular products such as the iPad Air, MacBook Air, Apple Watch Series 6, iPhone Pro, Apple TV 4K, and Apple Air Pods Pro, which are distinguished by their elegant design, robust processing power, and extended battery life.

Apple is the largest technology company in the world in terms of revenue and market capitalization and is among the Big Five American information technology companies, which also includes Alphabet (Google),


2022 Net Sales Distribution (Location)


Amazon, Meta (Facebook), and Microsoft. The Americas is Apple's biggest regional market, encompassing both North and South America. Other significant markets include Europe (comprising European countries as well as India, the Middle East and Africa), Greater China (encompassing mainland China, Hong Kong, and Taiwan), Japan, and the Rest of Asia Pacific (including Australia and other Asian countries not included in the company's other reportable segments).

Apple generates revenue from both Products and Services. Product sales comprise iPhone, Mac, iPad, Wearables, Home devices and Accessories while Services net sales are derived from sources such as iTunes (the company's online entertainment library), software sales, digital content sales, AppleCare support services, Apple Pay transactions and licensing fees.

## Industry overview

Apple Inc. (AAPL) creates, produces, and sells a wide range of products, including smartphones, personal computers, tablets, wearables, and accessories, to customers worldwide. Apple is the world's largest technology company in terms of revenue and market capitalization.

According to data from Sell cell, Samsung has consistently been the leader in global smartphone shipments from 2018 to 2022, with Apple in second place. In 2018, Samsung shipped 292.3 million units while Apple shipped 208.8 million units. In 2022, Samsung's shipments decreased to 260.9 million units while Apple's shipments increased to 226.4 million units.


Xiaomi, another significant player in the smartphone market, experienced an increase in shipments from 122.6 million units in 2018 to a peak of 191.0 million units in 2021 before decreasing to 153.1 million units in 2022. The total global shipment of smartphones decreased from 1,404.8 million units in 2018 to 1,205.4 million units in 2022.

From 2018 to 2022, Samsung and Apple consistently held the top two positions in terms of global smartphone market share with Xiaomi and OPPO following closely behind.

The average price per unit of an iPhone has consistently been higher than the average price per unit of a smartphone from 2018 to 2022. In 2018, the average price per unit of an iPhone was $\$ 789.69$ while the average price per unit of a smartphone was $\$ 277.84$. In 2022, the average price per unit of an iPhone increased to $\$ 907.64$ while the average price per unit of a smartphone decreased to \$299.31.

In summary, Apple has consistently been one of the top two vendors in terms of global smartphone shipments and market share from 2018 to 2022 and

Global Smartphones Shipment by Vendor in 2022


Average Iphone and Smartphone Price Per Unit (USD)

its products have consistently commanded a higher average price per unit compared to the overall smartphone market. Lenovo, HP Inc., and Dell have consistently been the top three vendors in terms of global PC shipments from 2018 to 2022, with Apple (AAPL) following in fourth place. In 2018, Lenovo shipped 59.86 million units while Apple shipped 18.08 million units. In 2022, Lenovo's shipments decreased to 68.00 million units while Apple's shipments increased to 28.60 million units.

The total global shipment of PCs increased from 259.6 million units in 2018 to a peak of 373.9 million units in 2021 before decreasing to 292.4 million units in 2022.

Apple's PC shipments increased from 18.08 million units in 2018 to 28.60 million units in 2022, representing a growth of approximately $58 \%$ over the period.

The average price per unit of a MacBook increased from $\$ 1,393.69$ in 2018 to $\$ 1,404.79$ in 2022, representing an increase of approximately $\$ 11.10$ or $0.8 \%$ over the period.



Apple Inc. (AAPL) has consistently been the leader in the global tablet market from 2018 to 2022, with Samsung following in second place. In 2018, Apple had a market share of $67.5 \%$ while Samsung had a market share of $16.9 \%$. In 2022, Apple's market share decreased to $52.6 \%$ while Samsung's market share increased to 28.9\%.

Global tablet sales increased from $\$ 48.69$ billion in 2018 to a peak of $\$ 59.78$ billion in 2021 before decreasing to $\$ 57.28$ billion in 2022.



## Pestle Analysis

Apple Inc. (AAPL) operates in a complex and rapidly evolving environment with both opportunities and challenges. A PESTLE analysis can help to identify the external factors that can influence the company's business performance.

Political Factors: Like many other American technology companies, Apple holds a significant amount of cash. This has led to calls for increased
corporate taxes in the United States, where income inequality is a major political issue. There have also been calls to limit Chinese imports to the United States in order to boost American manufacturing. Apple is heavily reliant on lower-cost manufacturing in China, and social and political unrest in that country could disrupt manufacturing or increase manufacturing costs. This could result in higher prices for Apple products, which could affect the company's profitability and competitiveness.

Economic Factors: Rising labour costs in China could reduce the cost advantage of some Apple products. Stagnant middle-class incomes in some developed countries, including the United States, could reduce demand for high-end consumer goods like those sold by Apple.

Sociocultural Factors: Apple's products are often viewed as status symbols and associated with a certain lifestyle. Changes in societal attitudes towards consumerism and materialism could affect demand for Apple's products.

Technological Factors: Apple is renowned for its innovation and ability to bring new products to market. To stay ahead of its competitors, the company must continue to invest in research and development.

Legal Factors: Apple's dominant position in fields such as music could lead to antitrust concerns and political pressure to break up the company or limit its market share.

Environmental Factors: Apple has taken steps to reduce its environmental impact through initiatives such as using renewable energy sources and reducing its carbon footprint. However, the company's reliance on manufacturing in countries with weak environmental regulations could be a concern.

Some of the opportunities for Apple in its macroenvironment include improving free trade policies, stable politics in developed countries, technological advancements, and a growing middle class in emerging markets. By taking advantage of these opportunities, Apple can continue to grow and strengthen its position in the global market.

## Porter 5 Forces Analysis

A Porter's Five Forces analysis can help to evaluate the level of competition in the technology industry and its potential impact on Apple Inc. (AAPL).

Competition in the industry: Apple faces intense competition from other technology companies such as Samsung, Lenovo, HP, Dell, Microsoft, Google, and Amazon. This is a strong force that can affect Apple's profitability and competitiveness.

Potential of new entrants into the industry: Apple has a strong brand reputation and a loyal customer base, which makes it challenging for new entrants to compete with it. However, the potential for new entrants to enter the market remains a moderate force that Apple must consider.

Power of suppliers: Apple has a large network of suppliers and can easily switch between them, reducing their bargaining power. This is a weak force that has little impact on Apple's business.

Power of customers: Apple's customers have high expectations and demand high-quality products and services, giving them more influence over Apple's pricing and innovation. This is a strong force that can affect Apple's profitability.

Threat of substitute products or services: Apple's products and services are unique and differentiated, making them less vulnerable to substitution by cheaper or alternative options. This is a weak force that has little impact on Apple's business.

Overall, this analysis suggests that industry rivalry and customer bargaining power are the two industry forces that can have the most significant effect on Apple's position in the technology market. To address these forces, Apple must continue to innovate and bring new products to market while also building strong relationships with its customers.

## SWOT Analysis

A SWOT analysis can help to identify the internal strengths and weaknesses of Apple Inc. (AAPL) as well as the external opportunities and threats it faces.

## Strengths:

Strong brand recognition and loyal customers: Apple is one of the most recognized brands globally, with a loyal customer base that continues to grow due to its innovative products, design quality, and user experience.

High-quality and Innovative products and services with unique features: Apple has a reputation for being a trailblazer in the tech industry, consistently introducing cutting-edge products and services that disrupt markets. The company is known for its high standards of quality and its ability to create userfriendly products that appeal to a wide range of customers. The integration of Apple's offerings enhances the overall user experience, which in turn strengthens customer loyalty.

Leading technology edge: Apple has a leading technological edge, allowing it to stay ahead of its competitors.

## Weaknesses:

High-priced products: Apple's products are often priced higher than those of its competitors, potentially limiting its customer base.

Limited advertisement and promotions: Apple's advertising and promotional activities are limited compared to those of its competitors.

Entering areas of non-competency: Apple has entered new markets where it may not have the same level of expertise or competency as its core business.

Locked in the Eco-system: The interconnected nature of Apple's ecosystem can make it difficult for users to switch to other brands, as the cost of transitioning can be high. While this can serve as a competitive advantage for the company by increasing customer retention, it may also discourage potential new customers who are hesitant to become locked into a single ecosystem.

Incompatibility with other software: Apple's software is often incompatible with other software, potentially limiting its usefulness for some customers.

## Opportunities:

Apple Services: Apple's diverse portfolio of services, including Apple Music, Apple TV+, Apple Arcade, iCloud+, Apple News+, and Apple Fitness+, provides customers with a comprehensive and integrated experience. The company's ability to bundle these services through its Apple One subscription package at a discounted rate further enhances the value proposition for its customers. This segment of Apple's business has demonstrated consistent growth and is expected to continue to expand as the company leverages the synergies between its devices and services ecosystem. Additionally, the availability of some of these services on non-Apple platforms, such as Android and Windows, broadens the company's potential customer base.

Expansive distribution network: Apple has an expansive distribution network that allows it to reach customers worldwide.

Apple's Wearables, Home, and Accessories: Apple's Wearables, Home, and Accessories segment has demonstrated robust growth, with revenues of $\$ 8.8$ billion in the third fiscal quarter of 2021, representing a $36 \%$ increase from the same period in the previous year. This segment includes popular products such as the Apple Watch, AirPods, HomePod, and Beats headphones. With nearly $75 \%$ of Apple Watch customers in the quarter being new to the product, there is significant potential for further growth in this category. The company's ability to expand its product offerings and integrate these devices with its services ecosystem presents a compelling growth opportunity.

## Threats:

Increasing competition: Apple faces increasing competition from other technology companies, potentially impacting its market share and profitability.

Market penetration: Factors such as local regulations or cultural differences may limit Apple's ability to penetrate new markets.

China tariffs: The trade dispute between the United States and China could result in increased tariffs on Apple's products, potentially impacting its profitability.

Global Tax Laws: Multinational corporations, such as Apple, are subject to complex tax regulations and potential sanctions in the various jurisdictions in which they operate. One notable example is the European Commission's State Aid Decision concerning Apple and Ireland, which highlights the challenges that companies may face in navigating international tax laws.

Overall, this analysis suggests that while Apple has many strengths and opportunities, it also faces significant threats and must address its weaknesses to remain competitive in the global market. By effectively leveraging its strengths, addressing its weaknesses, taking advantage of opportunities, and mitigating threats, Apple can continue to grow and strengthen its position in the global market.

## Financial Analysis

## Short-term stability

The current ratio, which measures a company's ability to pay its short-term liabilities with its current assets, has decreased from 1.13x in 2018 to $0.88 x$ in 2022. The quick ratio, which measures a company's ability to pay its short-term liabilities with its most liquid assets, has also decreased from 1.10x in 2018 to $0.85 x$ in 2022. The cash ratio, which measures a company's ability to pay its short-term liabilities with its cash and cash equivalents, has decreased from $0.22 x$ in 2018 to $0.15 x$ in 2022.


## Long-term solvency

The interest coverage ratio (EBIT/Interest expense), which measures a company's ability to pay its interest expenses with its earnings before interest and taxes (EBIT), has increased from 21.88x in 2018 to $40.75 x$ in 2022.

The interest coverage ratio (EBITDA/Interest expense), which measures a company's ability to pay its interest expenses with its earnings before interest, taxes, depreciation, and amortization (EBITDA), has also increased from 25.87x in 2018 to $44.42 x$ in 2022. This suggests that Apple's ability to pay its interest expenses has improved over time.


The debt-to-equity ratio, which measures a company's financial leverage by comparing its total debt to its total equity, has increased from 1.07 x in 2018 to $2.37 x$ in 2022.

The debt to capital ratio, which measures a company's financial leverage by comparing its total debt to its total capital (debt + equity), has increased from $0.52 x$ in 2018 to $0.70 x$ in 2022.

The debt to total assets ratio, which measures a company's financial leverage by comparing its total debt to its total assets, has increased slightly from $0.31 x$ in 2018 to $0.34 x$ in 2022.

The net debt to EBITDA ratio, which measures a company's leverage by comparing its net debt (debt cash) to its EBITDA, has decreased from 1.06x in 2018
to $0.74 x$ in 2022. This suggests that Apple's leverage has decreased over time.

The debt service coverage ratio (EBITDA/P+R), which measures a company's ability to pay its debt service (interest expense paid + principal repaid) with its EBITDA, has increased from 8.60x in 2018 to $10.44 x$ in 2022. This suggests that Apple's ability to pay its debt service has improved over time.


## Profitability

The gross margin, which measures a company's profitability by comparing its gross profit to its revenue, has increased from $38 \%$ in 2018 to $43 \%$ in 2022.

The EBITDA margin, which measures a company's profitability by comparing its earnings before interest, taxes, depreciation, and amortization (EBITDA) to its revenue, has increased from $32 \%$ in 2018 to $33 \%$ in 2022.

The EBIT margin, which measures a company's profitability by comparing its earnings before interest and taxes (EBIT) to its revenue, has increased from $27 \%$ in 2018 to $30 \%$ in 2022.

The net profit margin, which measures a company's profitability by comparing its net profit to its revenue, has increased from 22\% in 2018 to $25 \%$ in 2022.

The return on invested capital (ROIC), which measures a company's profitability by comparing its EBIT to its total capital (equity + debt), has increased from 32\% in 2018 to $70 \%$ in 2022.


The return on equity (ROE), which measures a company's profitability by comparing its net profit to its average equity, has increased from $55.92 \%$ in 2019 to $175.46 \%$ in 2022.

The return on assets (ROA), which measures a company's profitability by comparing its net profit to its average total assets, has increased from $15.69 \%$ in 2019 to $28.36 \%$ in 2022. This suggests that Apple's profitability has improved over time and that the company is generating more profit for each dollar of assets.

## Shrinking Total Shareholder' Equity and its impact on the Financial Ratios

An analysis of Apple Inc.'s (AAPL) financial statements shows that the company's total shareholders' equity has decreased by approximately 53\% from 2018 to 2022.

This decrease is due to a combination of large dividend payments and share buybacks over the period.

Apple's payments for dividends and dividend equivalents have increased by approximately $8 \%$ from 2018 to 2022, while it's repurchasing of common stock have increased by approximately $23 \%$ over the same period.

These actions have had a direct impact on metrics such as the debt-to-equity ratio, debt to capital ratio, return on invested capital (ROIC), and return on equity (ROE).

As a result of these changes, Apple's ROE has increased significantly and has exceeded $100 \%$ from 2021 onwards. Similarly, the company's debt metrics have also been impacted, with the debt-to-equity ratio increasing dramatically.

Shrinking Equity vs an Increasing Dividend Payments and Sharebuybacks (\$'millions)


Shrinking Equity (\$'millions) vs an Increasing ROIC and ROE (\%)


Shrinking Equity (\$'millions) vs an Increasing Debt to Equity and Capital


## Activity

An analysis of Apple Inc.'s (AAPL) working capital management shows that the company has been able to improve its efficiency in collecting payments from customers, selling inventory, and paying suppliers over time.

The trade receivables days, which measures the average number of days it takes for a company to collect payment from its customers, has decreased from 32 days in 2018 to 26 days in 2022. This suggests that Apple has been able to collect payment from its customers more quickly over time.

The inventory holding days, which measures the average number of days it takes for a company to sell its inventory, has decreased from 9 days in 2018 to 8 days in 2022. This suggests that Apple has been able to sell its inventory more quickly over time.

The trade payables days, which measures the average number of days it takes for a company to pay its suppliers, has decreased from 125 days in 2018 to 105 days in 2022. This suggests that Apple has been paying its suppliers more quickly over time.

Apple had a negative cash conversion cycle (CCC) from 2018 to 2022, decreasing from -84 days in 2018 to - 71 days in 2022. This means that Apple collected payment from customers faster than it paid suppliers, improving cash flow and providing a competitive advantage. Apple's ability to maintain a negative CCC over time suggests successful management of working capital and cash flow while maintaining good supplier relationships.

Overall, this analysis suggests that Apple has been effective in managing its working capital and cash flow over time. The company's ability to maintain a negative CCC provides it with a competitive advantage and suggests strong relationships with both customers and suppliers.

## Financial Modelling and Valuation

Apple Inc. (AAPL) is a global company that generates revenue from various locations and from both Products and Services. Product sales include iPhone, Mac, iPad, Wearables, Home devices and Accessories while Services net sales are generated from sources

-100 days

- Trade receivables days $■$ Inventory holding days Trade payables days $\quad$ Cash conversion cycle
such as iTunes (the company's online entertainment library), software sales, digital content sales, AppleCare support services, Apple Pay transactions and licensing fees.

To project Apple's expected revenue from 2023 to 2027, the company's revenue was divided into five parts: iPhone, Mac, iPad, "Wearables, Home devices and Accessories" and Services. Total global shipment projections, average price of device projections and revenue market share projections were used to estimate the expected sales of iPhone, Mac and iPad from 2023 to 2027.

The "Wearables, Home devices and Accessories" and Services segments have been growing aggressively from 2018 to 2022. It is expected that as more Apple devices (iPhone, iPad and Mac) are shipped, sales in these revenue lines will also increase. Therefore, their compounded annual growth rate (CAGR) from 2018 to 2022 was used to project their expected sales from 2023 to 2027.

The risk-free rate was based on the US 10-year Bond Yield while the gross cost of debt was derived from the yield of Apple Inc's $4.45 \%$ bond maturing in 2044. The perpetuity growth rate was calculated using the CAGR of Apple's actual revenue from 2022 to the projected 2027 revenue. The Discounted Free Cash Flow method was used to arrive at the Intrinsic Equity Value (see the Appendix pages for more information).

Discounted Cash Flow Method (DCF) Assumptions

| Perpetuity Growth Rate | $8.58 \%$ |
| :--- | :--- |
| Weight Average Cost of Capital (WACC) | $11.45 \%$ |
| Intrinsic Value/Implied Share Price | $\$ 225.38$ |
| Current Share Price | $\$ 190.68$ |
| Potential Gain/Loss | $18.20 \%$ |

## Key Considerations for a Holistic Analysis of Apple Inc.

## A Very Liquid Company

In our analysis of Apple's liquidity ratios, we considered only "cash" as a liquid asset. As of the end of 2022, Apple had $\$ 23.6$ billion in cash on its balance sheet, as well as current and non-current marketable securities worth $\$ 24.7$ billion and $\$ 120$ billion, respectively.

## Non-current Marketable Securities and Valuation

In our DCF valuation, we added only cash and current marketable securities to the enterprise value, excluding non-current marketable securities to be conservative while accounting for their relative illiquidity and valuation uncertainty.

## Apple Vision Pro

Apple Vision Pro is an innovative mixed reality headset created by Apple Inc. that is set to usher in a "new era of spatial computing". This standalone, wearable device integrates digital content with the physical environment, enabling users to engage with digital content as if it were present in their surroundings. With its cutting-edge technology and distinctive design, Vision Pro has the potential to provide its users with remarkable experiences and open new possibilities for developers. It remains to be seen whether this will revolutionize computing and enhance productivity.

## Negative Cash Conversion Cycle (CCC) vs Samsung's

Samsung is one of Apple's main competitors in several markets, including smartphones, tablets, wearables, and accessories. Apple's cash conversion cycle (CCC) is significantly shorter than Samsung's due to several reasons. Firstly, Apple has a large retail operation that allows it to receive payment in cash or via credit card for a significant portion of its sales,
effectively reducing its days of sales outstanding. In contrast, Samsung relies heavily on distributors for its consumer electronics operations and sells to other consumer electronics vendors who likely require a credit period.

Secondly, Apple's inventory turnover is much faster due to its efficient demand planning, use of contract manufacturers, and streamlined product portfolio. Samsung has a large manufacturing operation and offers a wide range of products and components, requiring more cash to be tied up in inventory.

Lastly, Apple appears to be able to negotiate better credit terms with its vendors due to its large sourcing volumes and use of largely similar components. Samsung deals with a wide range of products, implying that volumes to individual vendors could be smaller.

## The European Commission's State Aid Decision

It is important to note the ongoing legal proceedings related to the European Commission's State Aid Decision concerning Apple and Ireland. In 2016, the Commission ruled that Ireland had granted state aid to Apple through tax opinions issued in 1991 and 2007, ordering Ireland to recover $€ 13.1$ billion in additional taxes plus interest from Apple.

This decision was annulled by the General Court in 2020, but the Commission has appealed to the European Court of Justice. As of September 24, 2022, the adjusted recovery amount was $€ 12.7$ billion, excluding interest, and is held in escrow pending the conclusion of legal proceedings.

Apple may be eligible to claim a U.S. foreign tax credit for a portion of any incremental Irish corporate income taxes due related to the State Aid Decision.

In terms of valuation implications, we converted this amount plus interest to USD and subtracted it from the enterprise value in our DCF analysis. This conservative approach assumes that Apple will lose the case and pay this amount.

Disclaimer: Please note that this report is not a tax advisory report and does not claim to understand tax laws that will impact Apple's case.

| Income Statement (\$'millions) | 2018A | 2019A | 2020A | 2021A | 2022A | 2023P | 2024P | 2025P | 2026P | 2027P |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net sales: |  |  |  |  |  |  |  |  |  |  |
| Products | 225,847 | 213,883 | 220,747 | 297,392 | 316,199 | 344,821 | 375,792 | 410,385 | 449,086 | 492,457 |
| Services | 39,748 | 46,291 | 53,768 | 68,425 | 78,129 | 89,436 | 102,379 | 117,195 | 134,156 | 153,571 |
| Total net sales | 265,595 | 260,174 | 274,515 | 365,817 | 394,328 | 434,256 | 478,171 | 527,581 | 583,242 | 646,028 |


| Cost of sales: |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Products | 148,164 | 144,996 | 151,286 | 192,266 | 201,471 | 227,786 | 248,588 | 270,124 | 293,163 | 322,095 |
| Services | 15,592 | 16,786 | 18,273 | 20,715 | 22,075 | 23,665 | 25,369 | 27,196 | 29,154 | 31,254 |
| Total cost of sales | 163,756 | 161,782 | 169,559 | 212,981 | 223,546 | 251,451 | 273,957 | 297,320 | 322,317 | 353,349 |
| Gross margin | 101,839 | 98,392 | 104,956 | 152,836 | 170,782 | 182,806 | 204,214 | 230,261 | 260,925 | 292,680 |


| Operating expenses: |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Research and development | 14,236 | 16,217 | 18,752 | 21,914 | 26,251 | 26,986 | 30,532 | 33,848 | 36,934 | 41,352 |
| Selling, general and administrative | 16,705 | 18,245 | 19,916 | 21,973 | 25,094 | 28,598 | 31,773 | 34,668 | 37,528 | 42,120 |
| Total operating expenses | 30,941 | 34,462 | 38,668 | 43,887 | 51,345 | 55,584 | 62,305 | 68,515 | 74,462 | 83,472 |
| Operating income | 70,898 | 63,930 | 66,288 | 108,949 | 119,437 | 127,221 | 141,909 | 161,745 | 186,464 | 209,207 |
| Other income/(expense), net | 2,005 | 1,807 | 803 | 258 | (334) | (808) | $(1,042)$ | $(1,291)$ | $(1,569)$ | $(1,898)$ |
| Income before provision for income taxes | 72,903 | 65,737 | 67,091 | 109,207 | 119,103 | 126,414 | 140,867 | 160,454 | 184,894 | 207,310 |
| Provision for income taxes | 13,372 | 10,481 | 9,680 | 14,527 | 19,300 | 19,776 | 21,277 | 23,967 | 27,805 | 31,896 |
| Net income | 59,531 | 55,256 | 57,411 | 94,680 | 99,803 | 106,637 | 119,590 | 136,487 | 157,089 | 175,414 |


| Balance Sheet ( ${ }^{\prime}$ millions) | 2018A | 2019A | 2020A | 2021A | 2022A | 2023P | 2024P | 2025P | 2026P | 2027P |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total current assets | 131,339 | 162,819 | 143,713 | 134,836 | 135,405 | 165,785 | 184,198 | 202,569 | 220,325 | 237,058 |
| Total non-current assets | 234,386 | 175,697 | 180,175 | 216,166 | 217,350 | 208,881 | 211,277 | 220,021 | 233,668 | 248,018 |
| Total assets | 365,725 | 338,516 | 323,888 | 351,002 | 352,755 | 374,666 | 395,475 | 422,590 | 453,993 | 485,075 |
| Total current liabilities | 115,929 | 105,718 | 105,392 | 125,481 | 153,982 | 167,537 | 179,426 | 194,904 | 214,651 | 237,021 |
| Total non-current liabilities | 142,649 | 142,310 | 153,157 | 162,431 | 148,101 | 153,213 | 155,610 | 158,846 | 160,862 | 161,371 |
| Total liabilities | 258,578 | 248,028 | 258,549 | 287,912 | 302,083 | 320,750 | 335,036 | 353,750 | 375,513 | 398,392 |
| Equity |  |  |  |  |  |  |  |  |  |  |
| Total shareholders' equity | 107,147 | 90,488 | 65,339 | 63,090 | 50,672 | 53,916 | 60,439 | 68,840 | 78,481 | 86,683 |
| Total liabilities and equities | 365,725 | 338,516 | 323,888 | 351,002 | 352,755 | 374,666 | 395,475 | 422,590 | 453,993 | 485,075 |
| Check 1 \#\#>> Assets - (liabilities + Equity) $=0$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Check $2=\ggg$ Assets $=$ Liabilities + Equity | TRUE | TRUE | TRUE | true | TRUE | True | TRUE | true | TRUE | TRUE |
| Cash Flow (\$'millions) | 2018A | 2019A | 2020A | 2021A | 2022A | 2023P | 2024P | 2025P | 2026P | 2027P |
| Cash Opening Balance | 20,289 | 25,913 | 50,224 | 39,789 | 35,929 | 23,646 | 38,125 | 50,049 | 64,216 | 77,044 |
| Cash generated by operating activities | 77,434 | 69,391 | 80,674 | 104,038 | 122,151 | 121,610 | 129,240 | 146,708 | 167,462 | 186,903 |
| Cash generated by/(used in) investing activities | 16,066 | 45,896 | $(4,289)$ | (14,545) | (22,354) | $(4,708)$ | $(5,537)$ | $(6,914)$ | (9,654) | (12,268) |
| Cash used in financing activities | (87,876) | (90,976) | (86,820) | (93,353) | (110,749) | (102,423) | (111,780) | (125,628) | (144,979) | (166,851) |
| Increase/(Decrease) in cash, cash equivalents and restricted cash | 5,624 | 24,311 | (10,435) | $(3,860)$ | (10,952) | 14,479 | 11,924 | 14,167 | 12,829 | ,84 |
| Cash, cash equivalents and restricted cash, ending balances | 25,913 | 50,224 | 39,789 | 35,929 | 24,977 | 38,125 | 50,049 | 64,216 | 77,044 | 84,828 |
| Cash Adjustment | 0 | $(1,380)$ | (1,773) | (989) | $(1,331)$ | 0 | 0 | 0 | 0 | 0 |
| Cash Closing Balance | 25,913 | 48,844 | 38,016 | 34,940 | 23,646 | 38,125 | 50,049 | 64,216 | 77,044 | 84,828 |


| Discounted Free Cash Flow Valuation (DCF) (\$'millions) |  | 2018A | 2019A | 2020A | 2021A | 2022A | 2023P | 2024P | 2025P | 2026P | 2027P |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| EBIT |  | 70,898 | 63,930 | 66,288 | 108,949 | 119,437 | 127,221 | 141,909 | 161,745 | 186,464 | 209,207 |
| Operating tax | 25\%; | 17,725 | 15,983 | 16,572 | 27,237 | 29,859 | 31,805 | 35,477 | 40,436 | 46,616 | 52,302 |
| NOPAT |  | 53,174 | 47,948 | 49,716 | 81,712 | 89,578 | 95,416 | 106,432 | 121,309 | 139,848 | 156,906 |
| EBITDA |  | 83,806 | 78,284 | 78,147 | 120,491 | 130,207 | 142,161 | 157,802 | 177,894 | 203,379 | 227,888 |
| Gross Cash Flow |  | 66,082 | 62,302 | 61,575 | 93,254 | 100,348 | 110,355 | 122,325 | 137,457 | 156,763 | 175,586 |
| Cash Balance from Operation/Cash flows after working capital |  | 100,776 | 58,814 | 67,265 | 88,343 | 101,548 | 109,581 | 115,040 | 130,239 | 148,651 | 166,497 |
| Total Free Cash Flow |  | 87,463 | 48,319 | 59,956 | 77,258 | 90,840 | 94,422 | 99,803 | 114,321 | 130,640 | 146,473 |
| Continuing Value/Terminal Value |  |  |  |  |  |  |  |  |  |  | 5,528,435 |
| Total Undiscounted Cash Flow Value |  |  |  |  |  |  | 94,422 | 99,803 | 114,321 | 130,640 | 5,674,908 |
| Number of Periods |  |  |  |  |  |  | 1 | 2 | 3 | 4 | 5 |
| Present value of free cash flow |  |  |  |  |  |  | 84,719 | 80,346 | 82,577 | 84,668 | 3,300,002 |
| Enterprise Value |  |  |  |  |  |  |  |  |  |  | 3,632,313 |
| Add: |  |  |  |  |  |  |  |  |  |  |  |
| Cash |  |  |  |  |  |  |  |  |  |  | 23,646 |
| Current Marketable securities |  |  |  |  |  |  |  |  |  |  | 24,658 |
| Subtract: |  |  |  |  |  |  |  |  |  |  |  |
| All Debts/Borrowings |  |  |  |  |  |  |  |  |  |  | 120,069 |
| Apple/Ireland Tax Issue - European Commission State Aid Decision >>> |  |  |  |  |  |  |  |  |  |  | 15,659 |
| Intrinsic Equity Value |  |  |  |  |  |  |  |  |  |  | 3,544,889 |
| Implied Share Price |  |  |  |  |  |  |  |  |  |  | 225 |


| Financial Ratios | 2018A | 2019A | 2020A | 2021A | 2022A | 2023P | 2024P | 2025P | 2026P | 2027P |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Short-term stability |  |  |  |  |  |  |  |  |  |  |
| Current ratio | 1.13x | 1.54x | 1.36x | 1.07x | ${ }^{0.88 x}$ | ${ }^{0.99 x}$ | 1.03x | 1.04x | 1.03x | 1.00x |
| Quick ratio | 1.10x | 1.50x | 1.33x | 1.02x | 0.85x | 0.95x | 0.99x | 1.00x | 0.99x | 0.96x |
| Cash ratio | 0.22x | 0.46x | 0.36x | 0.28x | ${ }^{0.15 x}$ | 0.23x | 0.28x | 0.33x | 0.36x | 0.36x |
| Long-term solvency |  |  |  |  |  |  |  |  |  |  |
| Interest coverage ratio (EBIT/Interest expense) | 21.88x | 17.88x | 23.07x | 41.19x | 40.75x | 39.64 x | 44.35x | 52.33x | 59.54x | 64.82 x |
| Interest coverage ratio (EBITDA/Interest expense) | 25.87x | 21.89x | 27.20x | 45.55x | 44.42x | 44.30 x | 49.32x | 57.56x | 64.94x | 70.61x |
| Debt to equity | 1.07x | 1.19x | 1.72x | 1.98x | 2.37x | 2.24 x | 2.02x | 1.81x | 1.62x | 1.47x |
| Debt to capital | 0.52x | 0.54x | 0.63x | 0.66x | 0.70x | 0.69x | 0.67x | 0.64x | 0.62x | 0.60x |
| Debt to total assets | 0.31x | 0.32x | 0.35x | 0.36x | 0.34x | 0.32x | 0.31x | 0.30x | 0.28x | 0.26x |
| Net debt to EBITDA | 1.06x | 0.76x | 0.95x | 0.75x | 0.74x | 0.58x | 0.46x | 0.34x | 0.25x | 0.19x |
| Debt service coverage ratio (EBITDA/P + R) | 8.60x | 6.32x | 5.04x | 10.57x | 10.44x | 11.41x | 12.14x | 13.60x | 16.15x | 17.75x |
| Profitability |  |  |  |  |  |  |  |  |  |  |
| Gross margin | 38\% | 38\% | 38\% | 42\% | 43\% | 42\% | 43\% | 44\% | 45\% | 45\% |
| EBITDA margin | 32\% | 30\% | 28\% | 33\% | 33\% | 33\% | 33\% | 34\% | 35\% | 35\% |
| EBIT margin | 27\% | 25\% | 24\% | 30\% | 30\% | 29\% | 30\% | 31\% | 32\% | 32\% |
| Return on invested capital | 32\% | 32\% | 37\% | 58\% | 70\% | 73\% | 78\% | 84\% | 91\% | 98\% |
| Net profit margin | 22\% | 21\% | 21\% | 26\% | 25\% | 25\% | 25\% | 26\% | 27\% | 27\% |
| Return on shareholders' equity (ROE) |  | 56\% | 74\% | 147\% | 175\% | 204\% | 209\% | 211\% | 213\% | 212\% |
| Return on assets (ROA) |  | 16\% | 17\% | 28\% | 28\% | 29\% | 31\% | 33\% | 36\% | 37\% |
| Activity |  |  |  |  |  |  |  |  |  |  |
| Trade receivables days | 32 days | 32 days | 21 days | 26 days | 26 days | 25 days | 24 days | 23 days | 22 days | 21 days |
| Inventory holding days | 9 days | 9 days | 9 days | 11 days | 8 days | 9 days | 9 days | 9 days | 10 days | 9 days |
| Trade payables days | 125 days | 104 days | 91 days | 94 days | 105 days | 104 days | 100 days | 99 days | 100 days | 101 days |
| Cash conversion cycle | -84 days | -63 days | -61 days | -56 days | -71 days | -69 days | -66 days | -66 days | -68 days | -71 days |
| Growth |  |  |  |  |  |  |  |  |  |  |
| Revenue Growth Rate |  | -2\% | 6\% | 33\% | 8\% | 10\% | 10\% | 10\% | 11\% | 11\% |
| EBITDA Growth Rate |  | -7\% | 0\% | 54\% | 8\% | 9\% | 11\% | 13\% | 14\% | 12\% |
| EBIT Growth Rate |  | -10\% | 4\% | 64\% | 10\% | 7\% | 12\% | 14\% | 15\% | 12\% |
| PAT Growth Rate |  | -7\% | 4\% | 65\% | 5\% | 7\% | 12\% | 14\% | 15\% | 12\% |

