

AI Exuberance Has Overripened Apple's Valuation

Investors should consider an overexpanded multiple and key downside risks to long-term growth.

Morningstar Equity Research

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Executive Summary

Apple shares look overvalued to us after a torrid run since April 2024 with shares up 35% over that period. We attribute the stock's appreciation over this period to exuberance surrounding Apple's AI strategy and a subsequent expanded multiple. We don't believe the firm's long-term growth opportunity has improved enough to justify the expanded multiple today.

We love Apple as a business with a wide economic moat based on a robust ecosystem of hardware, software, semiconductors, and services. Nonetheless, we struggle to justify the firm's current high valuation. Many investors have to hold Apple in their portfolios to keep up with any benchmark, given the firm's status as the world's second-largest company by market capitalization. We see downside risk to current levels of the shares and recommend investors pursue an underweight exposure to the stock.

In this report, we will dive into our bearishness on Apple's valuation. We believe Apple's relative valuation stands at an untenable level and isn't supported by an improved long-term growth opportunity. We believe AI can drive a short-term growth cycle for iPhone unit sales, but that iPhone growth will normalize to midsingle digits thereafter. We also see longer-term growth headwinds to iPhone revenue, which we believe will result in lower future growth than historical levels. In our view, Apple's current high multiple would require a higher long-term growth opportunity, which we don't expect. We believe that as the market comes to recognize the short-term AI-driven growth cycle is ending, and also recognizes the slowing growth opportunity in the long term, Apple's multiple will come down to its recent historical average, which is in line with our valuation.






Companies Mentioned

Name/Ticker	Economic Moat	Currency	Fair Value Estimate	Current Price	Uncertainty Rating	Morningstar Rating	Market Cap (Bil)
Apple/AAPL	Wide	USD	200.00	228.00	Medium	★★	3,450.00
Alphabet/GOOG	Wide	USD	220.00	180.00	Medium	★★★★	2,240.00

Key Takeaways

- ▶ We believe Apple is overvalued today due in large part to investor exuberance surrounding AI and lofty long-term growth expectations, which have led shares up 35% since a nadir in April 2024. Investors should consider underweight exposure to Apple.
- ▶ We believe Apple's recent expanded multiple is unjustified. We doubt the higher long-term growth opportunity implied in the stock.
- ▶ We expect a growth cycle in fiscal 2025 and 2026 for Apple, spurred by AI software integration driving new iPhone unit sales. We expect this cycle to be temporary and for long-term iPhone growth to normalize to mid-single-digit levels after fiscal 2026.
- ▶ Long-term, we see headwinds to iPhone revenue growth that give us pause about expecting higher growth past a short-term AI-driven growth cycle. Key among these are a mature smartphone market and slowing revenue in China.
- ▶ We believe the market will come to recognize a lower ceiling to the AI iPhone cycle and lower long-term growth thereafter, which should be a negative catalyst for Apple stock.
- ▶ We model a bull-case scenario that would justify Apple's current valuation with fundamentals. This scenario requires higher revenue growth spurred by AI, lasting for a longer time.
- ▶ Investors should consider downside risks to Apple stock, including the uncertainty of AI's impact on iPhone revenue and antitrust cases. We model a bear-case scenario, based on these key risks, which implies a valuation of \$175 per share, implying roughly 25% downside risk to Apple's current valuation.

Exhibit 1 We Believe Apple's Current Valuation Implies Overexuberance Surrounding AI and Long-Term iPhone Growth, and Doesn't Adequately Bake in Downside Risks

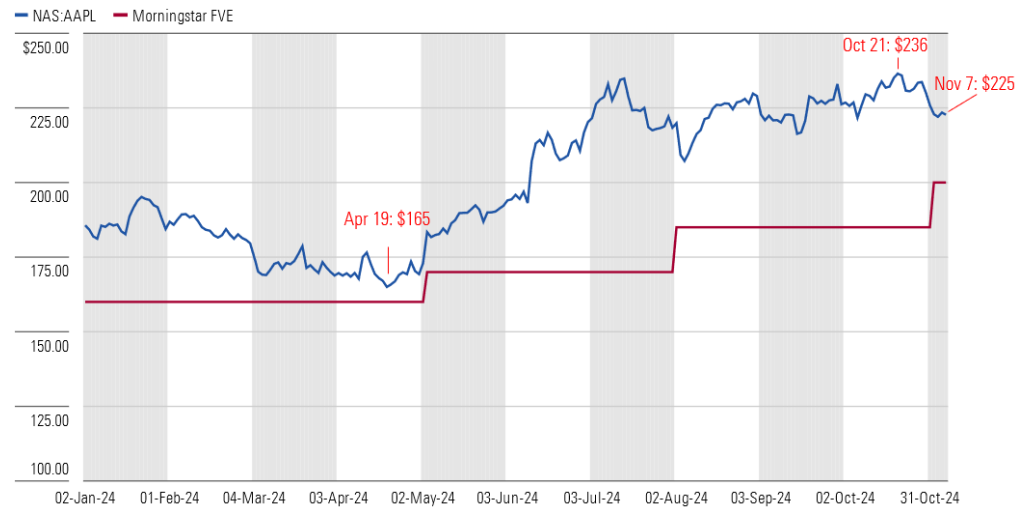
Topic	 Morningstar's View	 What the Market Says
AI (p. 7) 	AI should drive a growth cycle in fiscal 2025 and 2026, mostly from higher iPhone unit sales. We agree with the market here.	AI should drive a growth cycle in fiscal 2025 and 2026, mostly from higher iPhone unit sales.
Long-Term iPhone Growth (p. 11) 	We expect growth to taper after the AI iPhone cycle winds down following fiscal 2026. We consider headwinds to Apple's future iPhone revenue growth, including a mature and declining smartphone market and headwinds out of China.	Apple's current valuation implies iPhone revenue growth continuing at high levels past fiscal 2026, even above its historical 10-year average of 7%. This stems from optimistic expectations for AI as a long-term structural driver.
Downside Risk (p. 21) 	We believe Apple faces downside risk to its valuation from uncertainty over the impact of AI on financials and antitrust risk globally.	Apple's current valuation does not bake in downside risks relating to iPhone revenue growth or antitrust concerns.

Source: Morningstar.

Apple's Valuation Has Skyrocketed in 2024

We believe Apple is roughly 12% overvalued today, compared with our fair value estimate of \$200 per share. Apple shares are up 17% year to date, and up more than 35% from a nadir in April 2024. We've also raised our valuation during 2024 to account for a better long-term iPhone growth opportunity, but continue to see the firm's market valuation well above our forecast for future fundamentals.

Exhibit 2 Apple's Valuation Has Made a Torrid Run Since Bottoming in April 2024



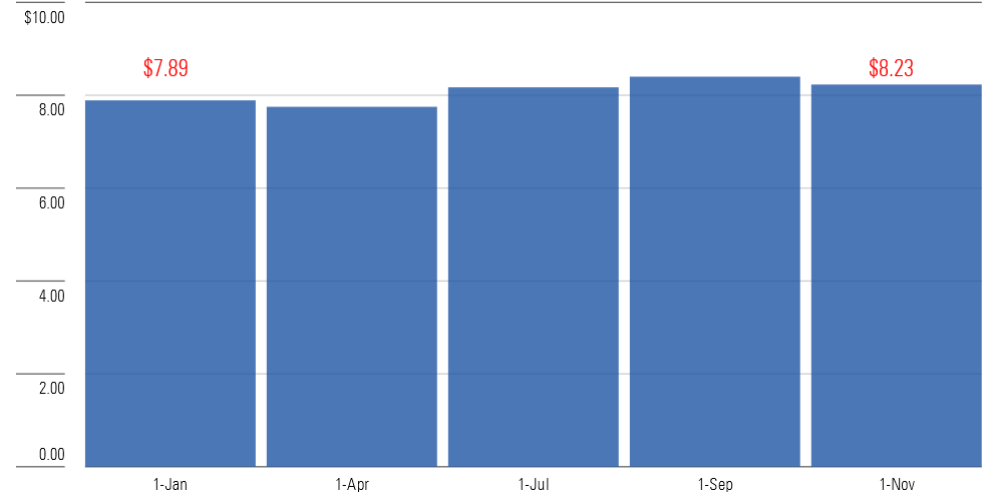
Source: PitchBook.

Part of this rise is due to higher medium-term growth expectations, particularly through fiscal 2026. Expectations have grown more optimistic for Apple's growth over this period, resulting primarily from higher iPhone revenue growth based on AI software functionality driving new device sales.

Exhibit 3 Consensus Estimates for Apple's Fiscal 2026 Earnings Have Risen About 4% Through 2024

Am

■ FactSet Consensus Median AAPL FY26 EPS



Source: PitchBook, FactSet.

We agree with this near-term optimism and are actually slightly above consensus when it comes to Apple's earnings through fiscal 2026. To us, this indicates that our disagreement with the firm's current market valuation comes down to investor sentiment and longer-term growth expectations, rather than fundamental expectations over the next two years.

Exhibit 4 Our Apple Earnings Forecast Is in Line to Slightly Above Consensus

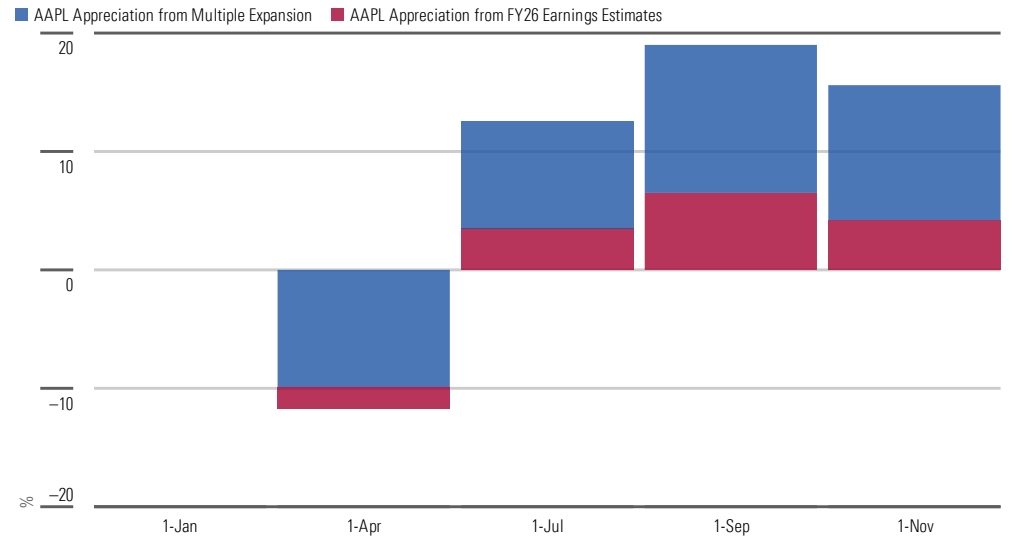


Source: Company documents, FactSet, Morningstar analyst estimates.

In our view, most of this share price appreciation has been driven by an expanding multiple, which we don't believe is supported by a significant enough, long-term fundamental improvement. While we agree with consensus on positive short-term forward-looking fundamentals, we view the market's relative valuation of these future cash flows as overexuberant. We base our skepticism on the firm's market valuation on three main tenets. First, Apple's share price runup in 2024 has been driven mostly by an expanding multiple with only modestly improved fundamental expectations through fiscal 2026. Second, Apple's forward price/earnings multiple has risen near all-time highs. Third, Apple holds a significantly higher multiple than its peer group of mega-cap technology companies, even despite posing the slowest growth prospects.

When we look at components of Apple's year-to-date appreciation in 2024, the expanded multiple stands out as the clear culprit. We've seen a 4% rise in fiscal 2026 earnings consensus estimates since Jan. 1. Apple's price/earnings multiple, implied by market price and fiscal 2026 consensus earnings estimates, has risen 11% over the same period. As of Nov. 1, we attribute more than 70% of Apple's appreciation in 2024 to an expanded multiple as we show in Exhibit 5. If one were to apply Apple's Jan. 1 market-implied fiscal 2026 price/earnings ratio to the current consensus expectations for fiscal 2026 earnings, it would imply a valuation of \$200 per share, right at our fair value estimate.

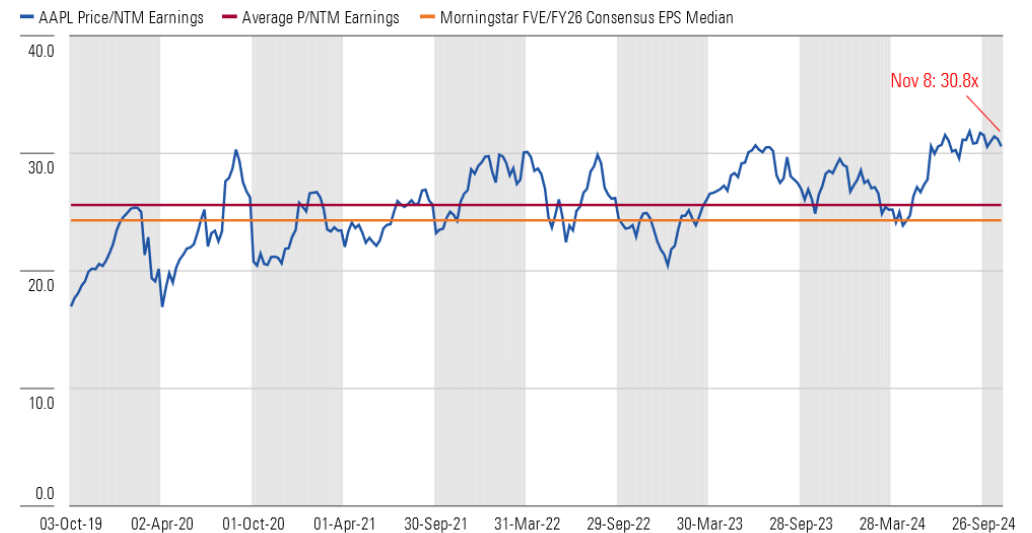
Exhibit 5 Apple's Appreciation in 2024 Has Been Driven Mostly by an Expanded Multiple



Source: PitchBook, FactSet.

Apple's price/earnings multiple now sits near historical highs. Apple's forward price/earnings multiple (valuation against earnings expectations for the next 12 months) has oscillated between 20 times and 30 times since 2020. Its current level puts it above the top end of this range as shown in Exhibit 6. We believe a higher-than-average multiple is warranted, based on our expectations for good growth over the next two years, but we believe this growth will taper after fiscal 2026 and that more moderate long-term growth won't allow Apple to fully "grow into" its current inflated multiple.

Exhibit 6 Apple's Near-Term Price/Earnings Multiple Is a Near Record High

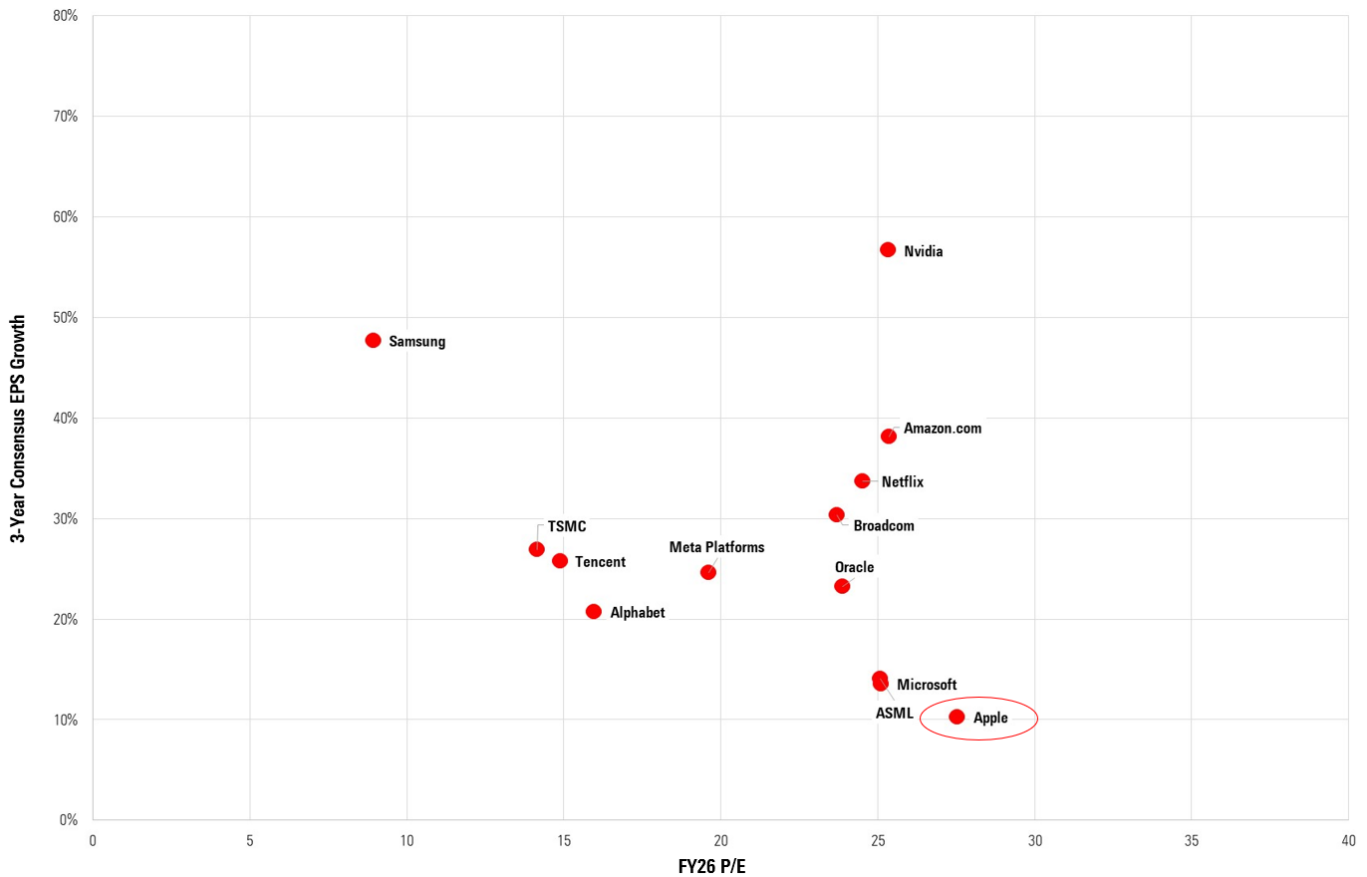


Source: PitchBook, FactSet, Morningstar analyst estimates.

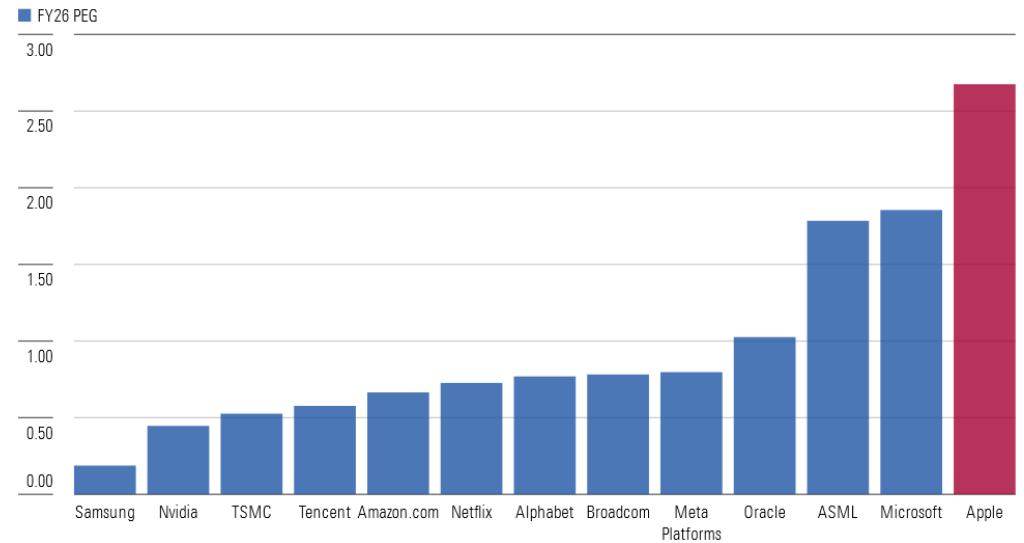
We value companies fundamentally, based on the present value of future cash flows. When we consider our fundamental valuation relative to fiscal 2026 consensus earnings expectations, it implies a multiple squarely in the middle of this historical range, and well below the current level. We concede our valuation puts us slightly below the five-year average for Apple's price/earnings, so investors could reasonably take a slightly more bullish view, but using even the five-year average would not get the stock to its current price. As such, we see Apple shares as overvalued at present levels.

Apple's expanded multiple in 2024 looks even less justified when comparing its valuation with those of other mega-cap technology companies. Of this select peer group, we assessed implied price/earnings multiples based on current market valuations and FactSet consensus median estimates for earnings through fiscal 2026. At present, Apple offers the highest fiscal 2026 price/earnings multiple, despite offering the lowest expected growth through fiscal 2026 of this peer group. Assessed another way, Apple's fiscal 2026 price/earnings/growth, or PEG, ratio, is significantly inflated compared with this peer group. We show this analysis in Exhibit 7 and Exhibit 8.

Exhibit 7 Apple Carries the Highest Fiscal 26 P/E Multiple of Mega-Cap Technology Peers, Despite Offering the Lowest Expected Growth



Source: PitchBook, FactSet.

Exhibit 8 Apple's Valuation Relative to Consensus Growth Is Far Above That of Mega-Cap Technology Peers**AI Will Drive a Short-Term Growth Cycle, but Won't Improve Long-Term Normalized Growth**

We believe Apple's appreciation and expanded multiple in 2024 have been driven by excitement over AI. AI should have a fundamental financial impact on iPhone revenue, which has led us to raise our valuation for Apple and has driven consensus expectations higher. Nevertheless, we believe Apple's revenue growth from AI will be short-lived, with our expectation for a two-year cycle through fiscal 2026. After fiscal 2026, we expect growth to taper. We believe Apple's expanded multiple would need to be justified by longer-term higher iPhone revenue growth from AI, which we don't expect.

Apple Intelligence Should Drive Consumers to Buy New iPhones

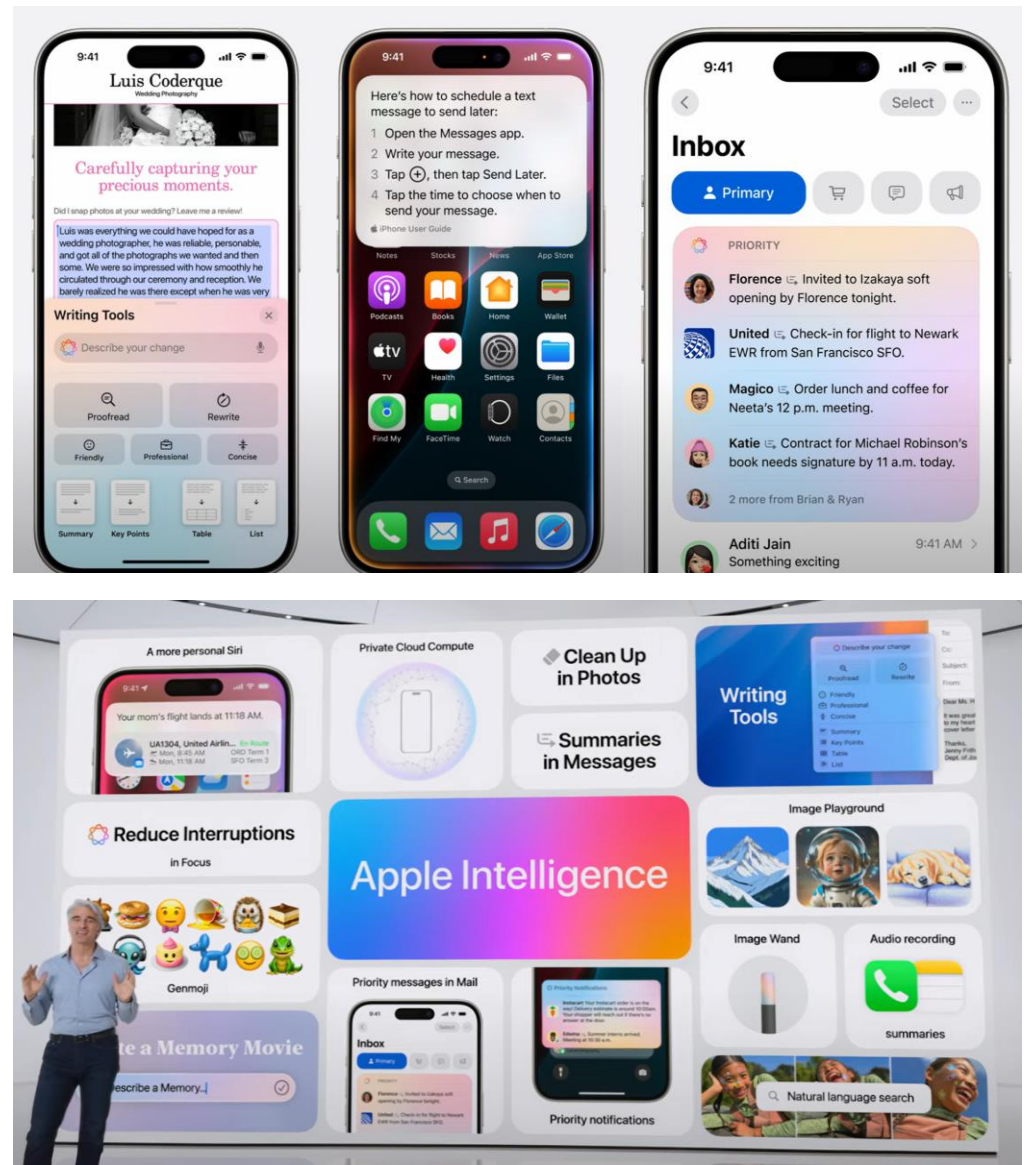
We like Apple's AI strategy thus far and believe it will successfully drive users to buy new iPhones to use AI features, given it requires the latest and greatest hardware to run. Apple Intelligence, the firm's suite of generative AI software features, relies on small, on-device generative AI models. These models require a minimum of 8 gigabytes of on-chip memory, or RAM, to run. This hardware is only available on the iPhone 15 Pro models and the iPhone 16 lineup. To gain access to these software features, consumers need to buy new iPhones.

We expect Apple's focus on integrated, personal AI to drive consumer demand. Apple Intelligence primarily focuses on integrating AI into existing iOS applications, like writing tools (Notes and email), Calendar, Photos, and Siri. Though each individual use case can appear small (proofreading an email, customizing an emoji, or prioritizing notifications) we believe the feature set in totality will greatly augment the iPhone user experience by making daily tasks and applications easier and more intuitive to use.

We believe the most appealing quality of Apple Intelligence is the ability to connect these disparate applications and take actions across them. For example, a consumer can ask Siri: "When should I leave

for the airport today?" Apple Intelligence can then pull flight details from an email, pull live arrival timing from the internet, pull live traffic data from the Maps application, and give one cohesive response: "You should leave at 4 pm today to pick up mom from the airport at 4:45 pm."

Exhibit 9 We Like Apple's Strategy of Integrating AI Into Existing Apps in Meaningful Ways for Daily Use



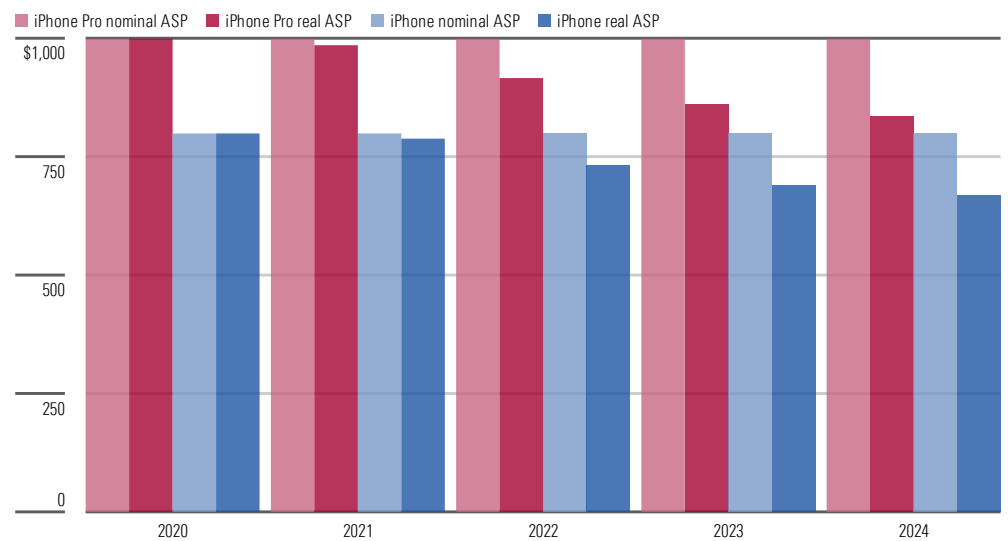
Source: Apple.

All of this adheres to Apple's strategic focus on security and privacy by running small generative AI models directly on the iPhone processor. These small models allow Apple Intelligence to access private information on-device without sharing data with a cloud, greatly enhancing the personal nature of the software.

Apple also has alternatives for outsourcing requests to larger generative AI models running in the cloud, either via Apple's private cloud servers (Private Cloud Compute) or via a partnership with OpenAI's ChatGPT. A consumer could open up the notes app and ask Siri: "Write my daughter a bedtime story about Elsa from *Frozen*" and be presented with a dialog box asking: "Do you want to outsource this request to ChatGPT?" In these scenarios, only the data explicitly consented to, gets shared with the cloud AI model.

Despite the higher chip and hardware requirements to run AI models directly on iPhones, Apple kept its starting prices the same for the iPhone 16 lineup compared with the iPhone 15 lineup. This marks the fifth straight year Apple has elected not to raise starting prices for the iPhone. In real terms (against five years of inflation) this means that consumers pay roughly 16% less than they did in 2020 for the equivalent new iPhone models.

Exhibit 10 New iPhones Have Become Less Expensive for Consumers in Real Terms Since 2020

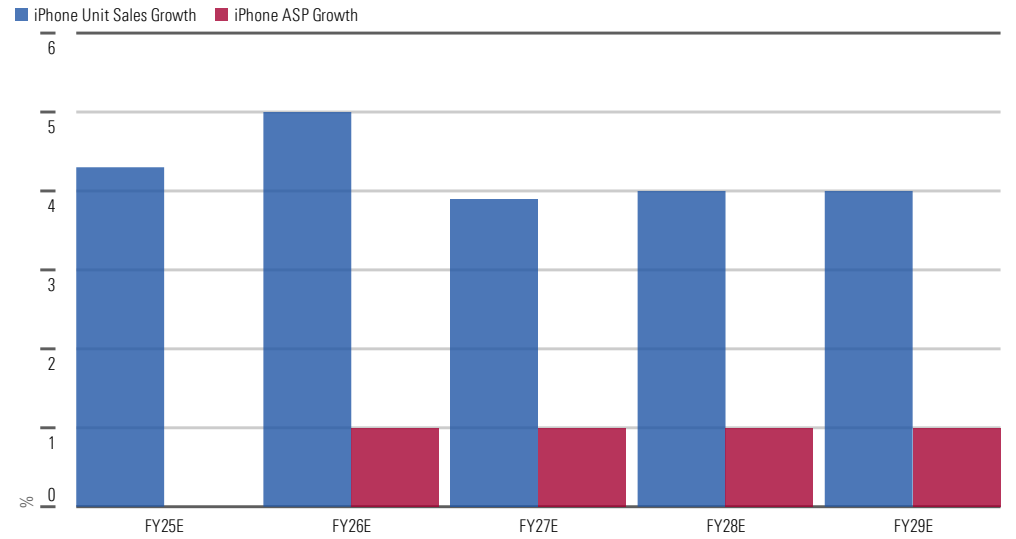


Source: Apple, FRED, Morningstar. Real ASPs derived from January CPI from each year using Jan. 1, 2020 as a starting point.

This absorption of higher input costs, rather than passing them to consumers, demonstrates Apple's focus on expanding its installed base. We believe this shows two aims: to increase the penetration of new AI functionality more quickly and to raise Apple's services revenue opportunity. As the linchpin of the Apple ecosystem, a larger iPhone installed base means better opportunities for cross-selling Mac, iPad, and wearable devices, as well as more opportunities for service subscriptions.

We see AI as enhancing the existing software lock-in of iOS and heightening Apple's customer switching costs. In the future, we expect Apple to remain conservative on pricing increases in favor of seeking unit sales growth. The moderate price increases we do forecast over the next five years will come primarily from greater penetration of higher-priced Pro models, which have been becoming more popular.

Exhibit 11 Our iPhone Revenue Forecast Is Driven by Unit Sales Growth



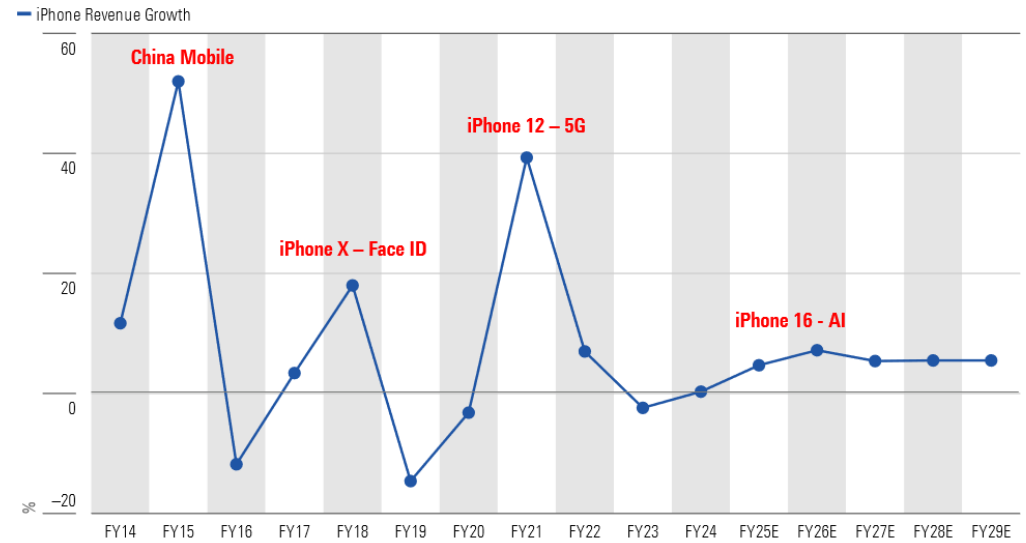
Source: Morningstar analyst estimates.

Don't Call It a "Supercycle"

With Apple focusing on unit sales overpricing, we believe iPhone unit sales growth is the primary metric investors should consider when assessing Apple's valuation. The number of iPhone unit sales is historically cyclical with new technologies or markets driving growth spikes roughly every three to four years. We've seen these spikes occur in 2015 (the entry into the Chinese market with the carrier China Mobile), in 2018 (the introduction of Face ID and a larger screen), and in 2021 (the introduction of 5G wireless and post-covid demand). In between these significant steps in technology or market access, growth tends to stagnate with interim iPhone models being more evolutionary than revolutionary. We've seen such a downcycle in growth in fiscal 2023 and fiscal 2024 following the growth spike in fiscal 2021.

We believe Apple's suite of AI software features will drive good unit sales growth and revenue growth in fiscal 2025 and 2026, but we don't expect a supercycle similar to what was seen in 2015 (adding China Mobile as a carrier) and 2021 (adding 5G capability and post-covid demand). Each one of these supercycles was driven by more than just technology transitions—we attribute more than half of the 2021 5G cycle to covid-related demand and higher disposable income. Growth in 2018 (driven in part by the introduction of Face ID in the iPhone X) is more reflective of a technology-driven cycle.

Exhibit 12 Apple's iPhone Growth Has Historically Been Cyclical and We Expect AI to Drive Another Growth Cycle



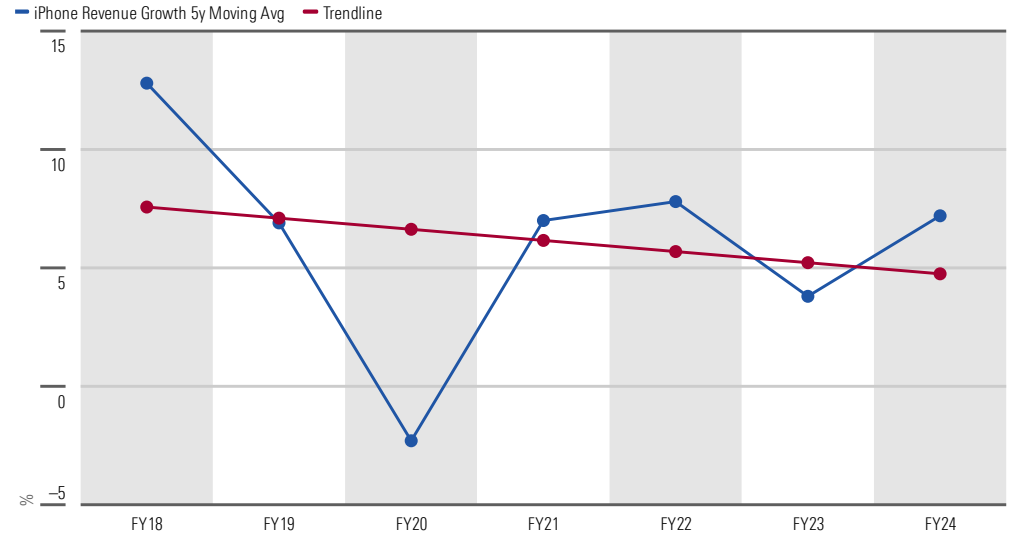
Source: Company documents, Morningstar analyst estimates.

Through-Cycle Growth Is Slowing

We see growth headwinds afflicting Apple that we expect to pressure future iPhone revenue growth, for cyclical peaks and through-cycle growth. These also moderate our expectations for the imminent AI cycle in fiscal 2025 and 2026, even relative to a technology-driven cycle like in fiscal 2018. We focus on a mature smartphone market and competition in China as key headwinds to future growth. These contribute to our skepticism of Apple's high valuation today. We expect the AI-driven cycle in fiscal 2025 and 2026 to be more modest than past cyclical peaks and for through-cycle growth in the future to be lower versus historical levels. To justify Apple's current valuation, we think investors would have to assume higher long-term growth than we think is reasonable.

One way to examine our slowing growth thesis is by adjusting for cyclicity using a five-year moving average. Looking back over the past 10 years, we see growth during these cycles slowing, as we show in Exhibit 13.

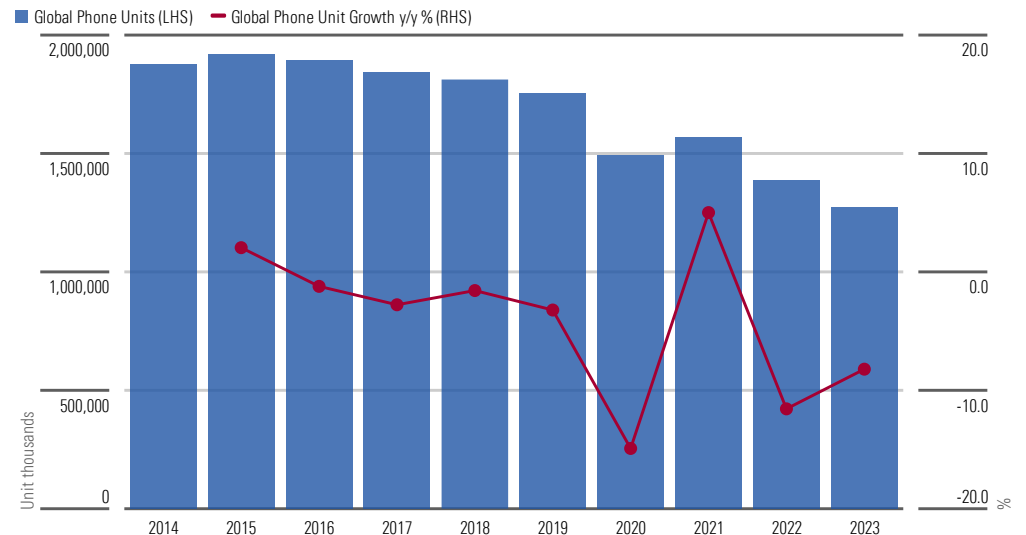
Exhibit 13 Apple's iPhone Revenue Growth Has Been Slowing During Cycles



Source: Company documents, Morningstar.

We believe there are three key reasons for this slowing growth. First, the smartphone market globally is broadly mature. Global smartphone unit sales peaked in 2015 and have come significantly lower since then, with a saturated user base. Effectively, nearly every person in the world has a phone, so unit sales growth has to come via consumers upgrading to new versions. There remain growth opportunities in emerging markets and Apple's ability to take market share—which is why iPhone units have been growing in a declining market—but we broadly see the growth opportunity for Apple in the future as more limited than it has been in the past.

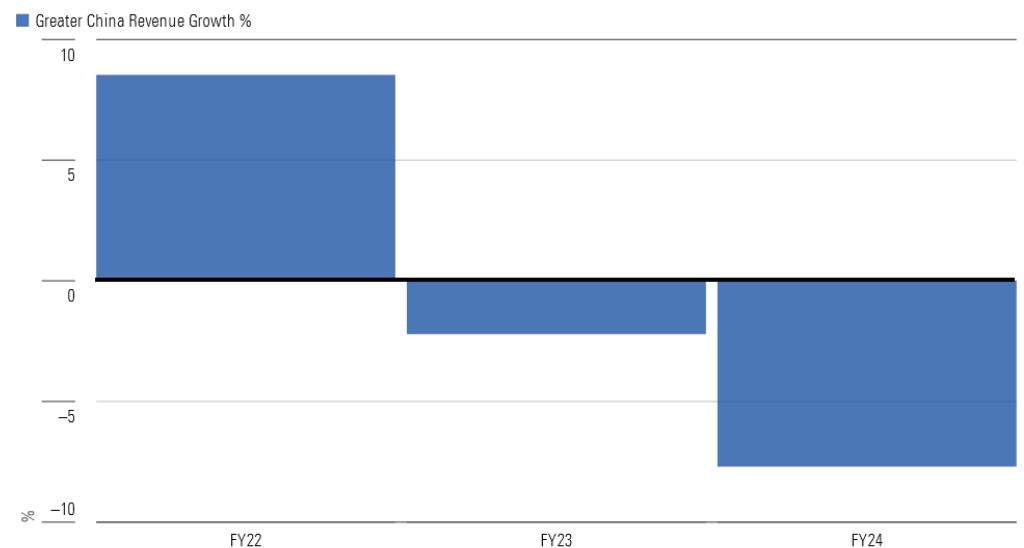
Exhibit 14 The Global Smartphone Market Is Mature and Unit Sales Have Declined Since 2015



Source: Gartner, Morningstar.

Second, we believe growth for Apple in China is slowing. Apple has been able to offset a declining global phone market over the past 10 years in part by seeking high growth in emerging markets like China and India. More recently, Apple has faced scrutiny as a foreign device maker amid trade tensions between the US and China. The Chinese government has incentivized government workers to use domestically produced smartphones and restricted iPhones for official government use. Additionally, domestic Chinese smartphone makers have released stepped-up models (for example, Huawei's Mate 60 Pro) that come closer technologically to the iPhone. Put together, Apple's market share in China has weakened recently and growth in this market has slowed for the firm. The 2024 election of Donald Trump as president-elect of the United States presents an additional risk to China's growth. If trade tensions between the US and China escalate, it could further dampen Apple's growth in this key market.

Exhibit 15 After Years of Being a Growth Driver, China Revenue Has Declined Over the Past Two Years



Source: Company documents.

Third, we see iPhone advancements increasingly driven by software, rather than radically improved hardware. AI is a key example here as a software enhancement that augments the use of similar hardware. We concede that AI requires hardware advancements (more advanced chips with better memory) that drive upgrades, but we see this as a one-time step change. In the future, we think AI use cases can evolve faster than their hardware requirements. In a world where more iPhone value is derived via improved software, rather than hardware, consumers can hold on to their older iPhones for longer without missing new features. This would then slow new iPhone unit sales growth and pose a downside risk to Apple's valuation.

To justify Apple's valuation today, investors would have to assume greater hardware requirements for AI in the future that continually drive new unit sales and potentially drive higher pricing. We'll examine this assumption in our bull-case scenario later in this report.

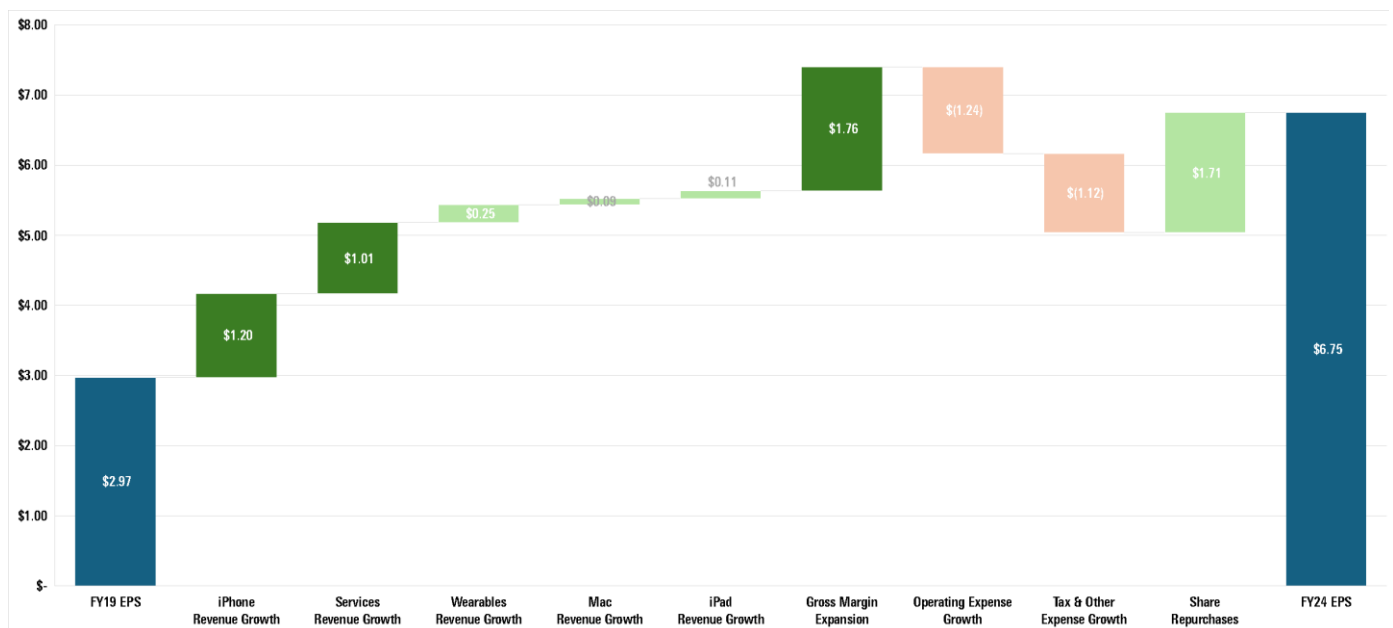
Outside of the primary processor, we see recent and future iPhone hardware advancements as incremental and evolutionary, rather than revolutionary. Displays and cameras continue to get better and phones continue to get lighter, but we don't think either one drives new product adoption by itself. In short, the displays, cameras, and form factor are already so good that incremental improvements offer little tangible benefit to consumers. We believe large technological advances, like 5G capability and AI enablement, drive stronger short-term cycles, but iPhone evolution is broadly slowing, bringing decelerating growth with it.

We See Moderating iPhone Growth Expectations as Apple's Primary Negative Catalyst

We believe slowing iPhone unit sales growth will be the primary negative catalyst for Apple's high-flying multiple to return to earth. AI should boost iPhone revenue in fiscal 2025 and 2026 in what we see as a short-term, moderate upcycle. Once the market starts to recognize the low ceiling to the current upcycle and anticipate slowing growth thereafter, Apple's multiple should compress back to its recent historical average.

We believe Apple's primary valuation driver is iPhone revenue growth, which makes this the crux of our thesis. Services revenue growth and gross margin are also meaningful drivers, but we find less of a disconnect in the market on these two. Combined, these three hold disproportionate leverage over Apple's earnings growth, as we show in Exhibit 16. To us, products like the Mac and iPad are minor contributors to results and are more important to Apple's overall customer lock-in and wide moat than they are to overall financial results. We don't see the stock trading on Mac or iPad results. Readers will note the strong contribution from share repurchases on EPS growth in Exhibit 16, but this doesn't reflect fundamentals, in our view.

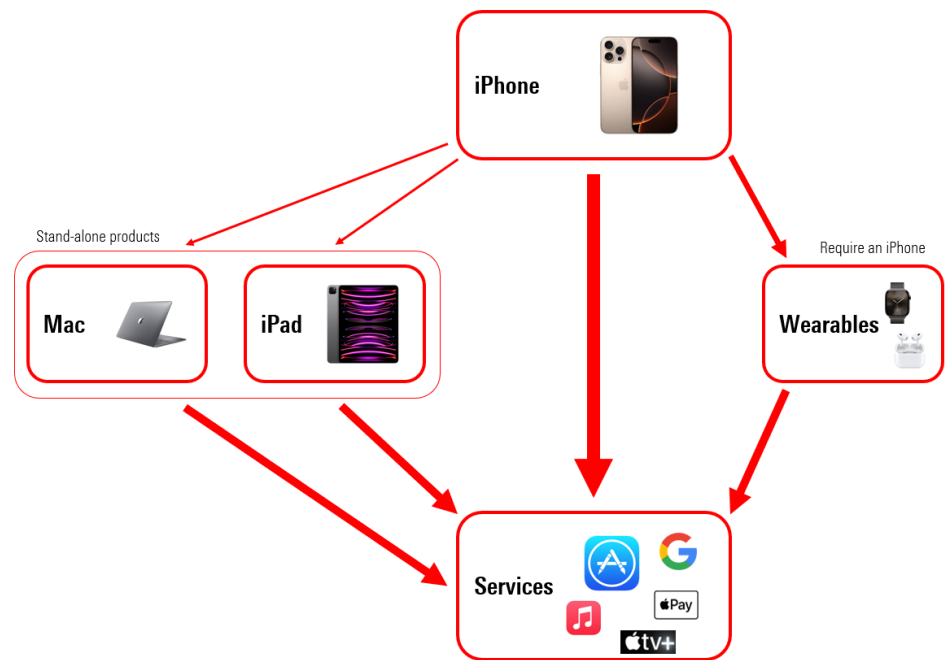
Exhibit 16 Apple's Largest Fundamental Drivers of Earnings Growth Are iPhone Revenue, Services Revenue, and Gross Margin Expansion



Source: Company documents, Morningstar.

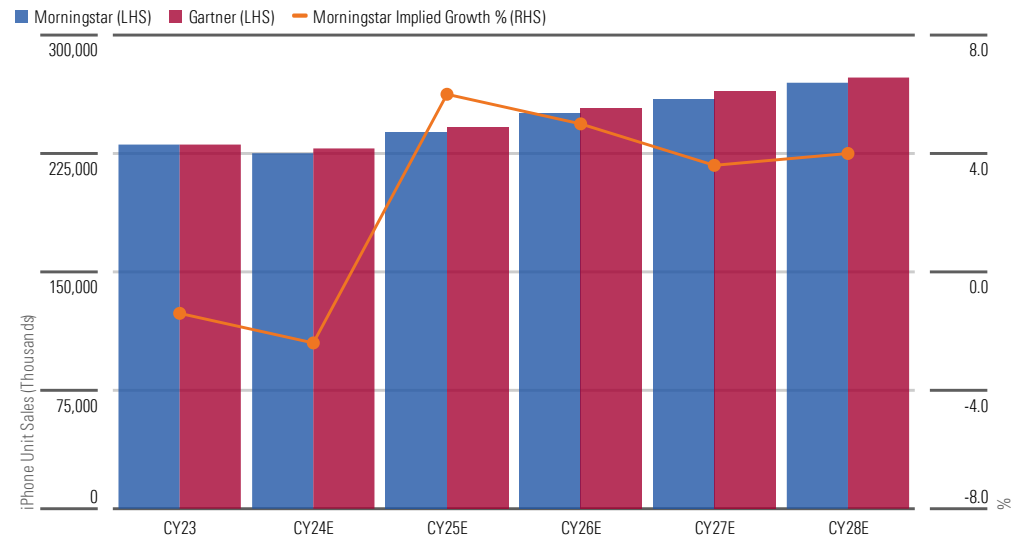
We believe the iPhone is the dominant driver among these three leading contributors to Apple's earnings. We believe services revenue growth and gross margin expansion are largely driven by the iPhone installed base. The iPhone is Apple's flagship product and continues to make up roughly half of total company revenue. In our view, the iPhone is the linchpin of Apple's ecosystem of hardware, software, and services. The iPhone is how Apple locks customers in via auxiliary products like the Mac, the iPad, and its tightly integrated software and services ecosystem. In short, the iPhone drives Apple's other product and services sales.

Exhibit 17 The iPhone Drives All of Apple's Other Sales, With Auxiliary Hardware Helping to Drive Services



Source: Morningstar.

We expect Apple to continue prioritizing unit sales, thus foregoing the pricing lever for future iPhone revenue growth. We expect an AI-driven cycle to generate roughly 5% annual unit sales growth for the iPhone in fiscal 2025 and 2026. Thereafter, we expect a slowdown to 4% growth, led by the end of the AI-driven upcycle and growth headwinds from a mature smartphone market and China that we described earlier. This also aligns with other third-party market forecasts, as shown in Exhibit 18.

Exhibit 18 Our iPhone Unit Sales Forecast Agrees With Gartner and Implies Slowing Growth

Source: Gartner, Morningstar analyst estimates.

We forecast iPhone revenue will grow 6% annually through fiscal 2029. This is slightly below historical growth of 7% over the last 10 years, which adheres to our view that growth headwinds are increasing for iPhone revenue. As the market anticipates slower growth in future years, we expect Apple's multiple to compress.

Services Growth Faces Headwinds Too

Apple's services revenue presents a potential secondary negative catalyst to us. We believe services revenue growth is a key secondary driver behind iPhone revenue growth for Apple's market valuation. We expect stronger growth for Apple's services revenue, but here we also expect a deceleration from historical growth.

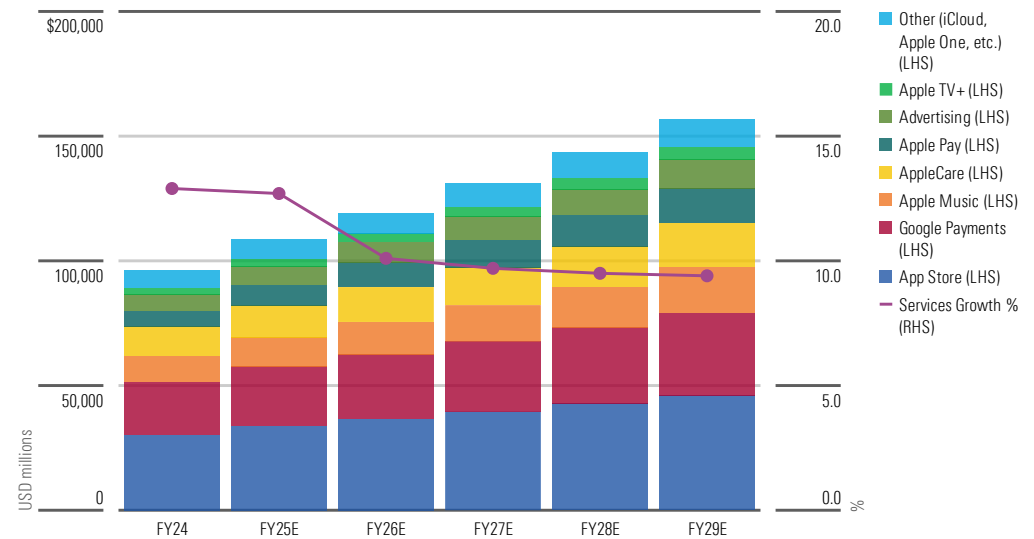
Services are a broad bucket, but the majority of revenue from these come from two large places: payments from Google for its place as the default search engine in Apple products and fees charged to developers in the App Store. We estimate that these two contributors make up more than 50% of Apple's services revenue with the rest coming from a broad bucket of advertising and subscriptions like Apple Music, Apple TV+, AppleCare, Apple Pay, iCloud, and more. Again, we believe revenue from these are largely add-ons to iPhone units, making them a secondary valuation driver behind iPhone growth, in our view. The App Store, Google Search, and Apple's myriad other services largely come from iPhone users.

We expect a slowdown in revenue growth from the App Store, which is the largest piece of Apple's services, resulting from ongoing antitrust scrutiny. In short, we expect Apple's fee share of App Store gross revenue to come down over the medium- to long term, modestly offsetting growth in gross App Store revenue. In our forecast, this results from antitrust regulation and a proactive approach to avoiding antitrust scrutiny. We still expect growth here, but slower than historical levels as Apple concedes some

of its share of its revenue back to developers to avoid potential fines and future investigations from regulators. We will examine the potentially greater impact on services revenue from antitrust regulation in our bear-case scenario later in this report.

Overall, we forecast 10% growth for Apple's services revenue through fiscal 2029, rising to a 28% mix of revenue in fiscal 2029 compared with a 25% mix in fiscal 2024. This is a slowdown from growth of 18% and 15% in the past 10 and five years, respectively. We believe this slowdown is logical considering more mature services that have already attracted many customers, slowing growth in iPhone unit sales that drive services, and antitrust pressures on App Store revenue growth.

Exhibit 19 We Anticipate Strong Services Growth to Taper Down Slightly Over Our Forecast



Source: Company documents, Morningstar analyst estimates.

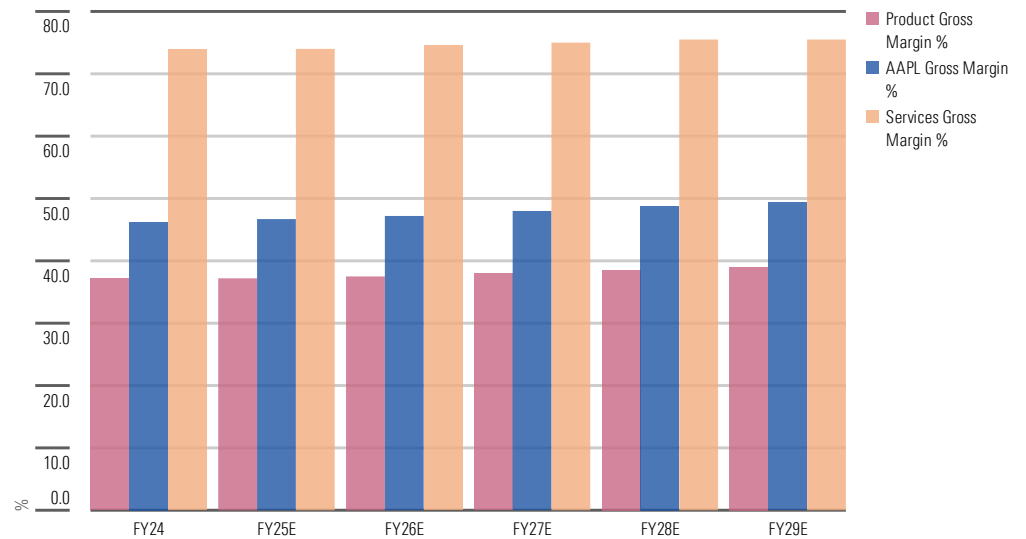
We Believe in Margin Expansion for Apple

Margin expansion is the other key driver of Apple's valuation, but we don't see this as the reason for Apple's overvaluation or as a future negative catalyst. Gross margins have been expanding steadily for Apple as a result of two key dynamics: rising services revenue and vertical integration. Services revenue carries a higher gross margin for Apple (particularly with its payments from Google being nearly 100% profit) and this has been rising as a proportion of Apple's total, buoying the firm's total margin.

Apple's core product margins have been rising too, primarily due to Apple bringing more of its product component design in-house. The key example here is Apple silicon. Apple now designs all of its core processors, including the A-series for the iPhone, the M-series for the Mac, iPad, and Vision Pro, and the S-series for the Watch. In doing so, Apple is trading component costs for R&D investment and streamlining the bills of materials for its products. This allows the firm to reduce product price inflation, as we described earlier, all while gaining profitability.

We expect margins to continue rising with Apple bringing more chips under its own design (we expect an internal wireless modem to replace Qualcomm before the end of the decade) and a rising mix of services revenue. We don't believe Apple will raise pricing significantly to boost margin, given the focus on unit sales we discussed earlier and its ability to use vertical integration to raise margin. Even as Apple has lowered prices for iPhones in real terms over the past five years, its product gross margin has risen 550 basis points, indicating to us that Apple's cost-reduction pace is ahead of inflation. We also believe services' gross margin can continue to rise via an expanding user base and strong leverage against a centralized cost structure. All told, we forecast Apple's gross margin to expand by roughly 300 basis points by fiscal 2029, reaching 49%.

Exhibit 20 We Expect Vertical Integration and a Rising Services Mix to Drive Apple's Gross Margins Up



Source: Company documents, Morningstar analyst estimates.

Slowing Growth in Outer Years Should Drive Apple's Multiple Down

All told, we forecast Apple's total company revenue growth to slow to around 7% in fiscal 2027, below its 10-year historical average of 8%. This slowdown is led by our theses for slowing iPhone unit sales and services revenue, which we described earlier. We believe that the forward multiple on fiscal 2026 earnings (the end of the AI-driven iPhone cycle) should reflect compression back to Apple's 5-year historical average, at around 25 times. Valuing Apple at 25 times the FactSet consensus median estimate for fiscal 2026 earnings, \$8.23, would imply a valuation of \$205 per share, right around our fair value estimate of \$200 per share.

Exhibit 21 We Expect Apple's Multiple to Revert to Historical Average, Bringing Shares Down to Our Valuation

	Consensus Median EPS		Implied P/E		Stock Price
	2025	2026	2025	2026	
1/1/2024	\$ 7.20	\$ 7.89	26.74	24.40	\$ 192.53
11/8/2024	\$ 7.38	\$ 8.23	30.75	27.58	\$ 226.96
Morningstar FVE	\$ 7.49	\$ 8.60	26.70	23.26	\$ 200.00

FY26 Consensus Median EPS	Hist. Avg. P/E	Implied Valuation
\$ 8.23	25.00	\$ 205.75

Source: PitchBook, FactSet, Morningstar analyst estimates.

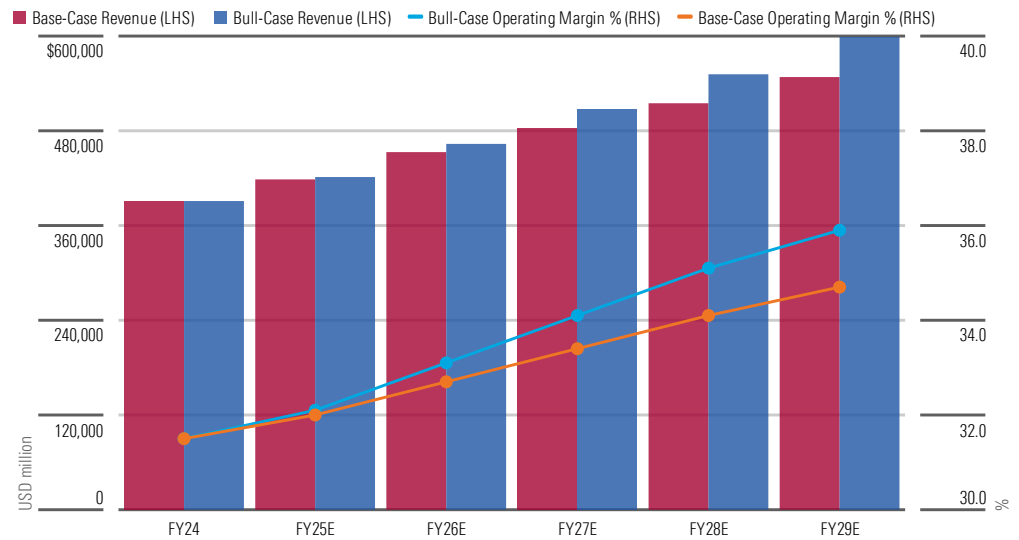
More Bullish Long-Term Fundamentals Could Justify Apple's Valuation Today

We discussed earlier that much of Apple's appreciation in 2024 has come from an expanded multiple and rising investor sentiment, which we think overestimates the long-term impact of AI past the short-term growth cycle. However, we find it useful for investors to model out what fundamentals would be needed to justify Apple's current share price. We model a bullish scenario with a fair value estimate of \$225 per share in Exhibit 22. This scenario gets us close to Apple's current valuation and focuses on greater and more enduring strength from the firm's AI offering.

In this scenario, we model stronger iPhone unit sales growth and stronger iPhone pricing increases than in our base case. We model roughly 1% higher iPhone unit sales growth over the next five years, driven by a greater and more enduring impact on hardware upgrades from AI than we model in our base case. In this scenario, we assume that future advancements in AI software will begin requiring even greater hardware performance, leading to further hardware upgrades for consumers to use the most cutting-edge models. This could lead to a more enduring growth cycle from AI, rather than the two-year impact we bake into our base case.

We also model iPhone prices rising more in line with inflation—thus reversing Apple's trend of constant pricing over the last five years—in the outer years of our forecast. This would be driven by a widening performance gap between the Pro and base iPhone models, with the Pro models gaining more memory and processing power to run even stronger AI models than their base counterparts. In this scenario, iPhone revenue growth would lightly outpace its historical growth rates over the past 10 years, with strength from AI more than offsetting headwinds from a mature smartphone market and China. Investors with more bullish expectations for iPhone growth may align closer to this bullish scenario.

Exhibit 22 Our \$225 Bull Case Assumes 2% Higher Growth and 1% Higher Operating Margin Through Fiscal 2029



Source: Company documents, Morningstar analyst estimates.

In addition to stronger iPhone expectations in this bull-case scenario, we model AI upside providing modest benefits to Mac revenue, Vision Pro revenue, and services. We believe this scenario with greater benefits to device sales, from AI incorporation, would benefit Mac and Vision Pro units alongside iPhone units, with each also incorporating AI functionality. We model roughly 1% higher growth for Mac revenue versus our base case as a result.

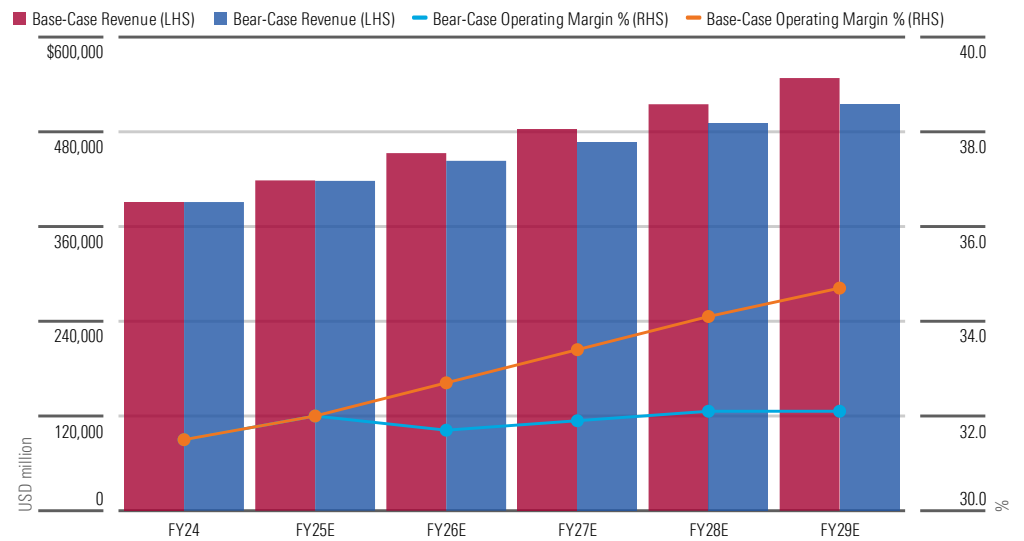
We also model a fledgling services revenue stream from AI subscriptions for Apple in this bull case. We model a widening of Apple's AI offering here with better models on iPhone Pro devices and users able to pay a monthly fee to gain greater usage of third-party models like ChatGPT. In this bullish scenario, we model this AI services revenue stream rising to \$10 billion in fiscal 2029. Further, we model improving penetration for Vision Pro due to the incorporation of AI into virtual reality computing. This leads to Vision Pro generating \$7 billion in revenue in fiscal 2029 versus \$3 billion in our base case. We model all of this to generate operating leverage with operating expenses growing at the same rate as our base case.

In summary, we believe a combination of the above events could justify buying Apple today. AI and its financial impact is a key place where investors can take more bullish or bearish views on the stock and we believe this has primarily driven Apple's appreciation this year. We remain cautious about this bull-case series of events because it requires so many variables to go exactly Apple's way. We take a more measured view with offsetting dynamics between bullish tailwinds and bearish headwinds. We think the odds of some of the headwinds we highlighted playing out, are simply too high to give Apple full credit for this bull-case scenario today.

We See Key Downside Risk for iPhone Growth and Antitrust Cases

Last, we examine downside risks to Apple that could lead to lower future growth and weaker share price performance. Key among these are risks to iPhone growth and antitrust risks. We model a bear-case scenario focusing on these downside risks and their impact on Apple's financials. In this bear-case scenario, our fair value estimate is \$175 and implies roughly 25% potential downside risk to Apple's current valuation. In our view, these risks are not fully valued in Apple's current share price.

Exhibit 23 We Value Shares at \$175 in a Bear-Case Scenario With Lower iPhone Growth and Antitrust Headwinds

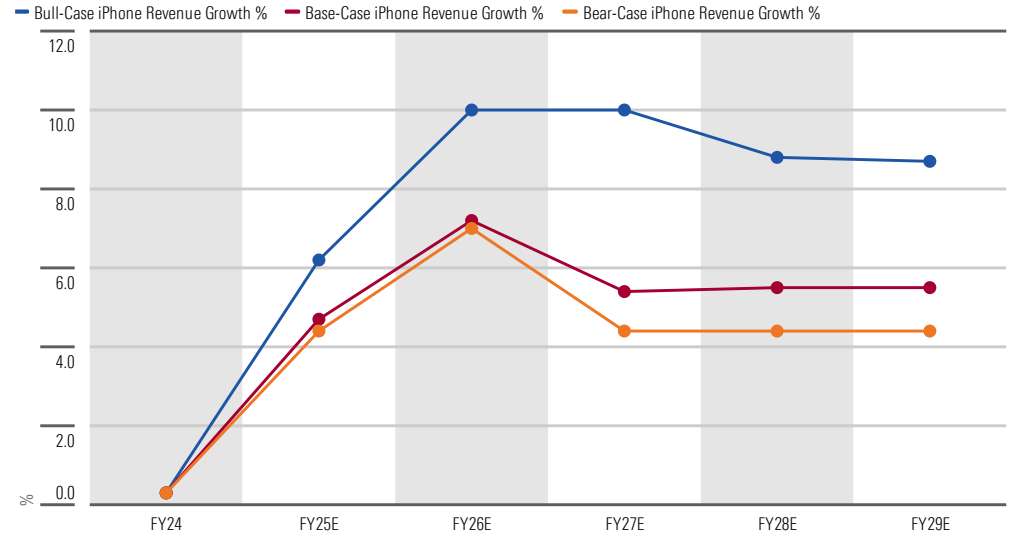


Source: Company documents, Morningstar analyst estimates.

For iPhone growth, we outlined our views that unit sales are slowing in response to a mature global market, headwinds out of China, and slower technological evolution. In our base case, we believe the revenue impact from AI can be a positive offset to these headwinds in the short term. However, we believe there's a case for a weaker contribution from AI. Early shipment reports about the iPhone 16 lineup have skewed negative with lower orders for Apple's suppliers and shorter lead times for consumers, indicating weaker demand. Apple's guidance for the December quarter of 2024 also implies weak year-over-year iPhone revenue growth. We attribute these in part to the delayed rollout of Apple Intelligence, which wasn't available for consumers until late October 2024, more than a month after the iPhone 16 became available. However, if these negative shipment updates continue, it could portend a weaker growth cycle for the iPhone 16 and potentially the iPhone 17 lineup, which we expect to be released in late 2025.

If AI is not able to spur a strong unit sales growth cycle, as we expect in our base case, there could be material downside to Apple stock with existing growth headwinds having a greater impact. In our bear case, we model a similarly modest cycle to our base case in fiscal 2025 and fiscal 2026, followed by these existing growth headwinds weighing more heavily on long-term growth. This results in roughly 1% lower iPhone revenue growth through fiscal 2029 than our base case.

Exhibit 24 The Impact of AI on iPhone Revenue Is a Key Differentiator Between Our Scenarios for Apple's Valuation



Source: Company documents, Morningstar analyst estimates.

Last, we view antitrust risk as a material downside risk to Apple shares. We believe the most likely antitrust hits to Apple would be to its services business, namely its payments from Google and its App Store revenue. Apple and Google are facing antitrust scrutiny across the globe with material legislation in the European Union and ongoing court cases in the United States. We outline these cases in Exhibit 25.

Exhibit 25 We Identify Three Primary Antitrust Risks Apple Shareholders Should Watch Out For

Material Antitrust Risk	What Is It?	How Does It Affect Apple?	Morningstar's Take
European Commission Digital Markets Act (DMA)	In September 2023, the European Commission designated Apple as a "gatekeeper" under the Digital Markets Act.	The DMA requires Apple to allow third-party interoperation with its products, like third-party app stores or payment platforms. It also requires the option for app users to exit the App Store for payments. If Apple were found to be in continuous violation of the DMA, it could face a fine up to 10% of global revenue.	We believe Apple's own products and services will overwhelmingly remain the preferred choice on its devices. Additionally, the EU only represents about 7% of Apple's global revenue, making any impact marginal in our view. We expect Apple to comply with the minimum regulations, and not to face the 10% revenue fine.
US Department of Justice Complaint Against Apple	In March 2024, the US DOJ filed an antitrust complaint against Apple. The complaint is broad ranging about Apple's integrated ecosystem, and mentions iMessage, Apple Watch integration, Apple Pay, and the App Store.	If Apple is deemed to be an unlawful monopoly, it could require opening up its ecosystem to third-party app stores and payment platforms, or required integration with third-party wearables.	We expect a moderate opening of Apple's ecosystem, likely in the form of allowing third-party app stores and payment platforms, as is already the case in Europe. We model this becoming a modest headwind to App Store revenue in the long term.
US Department of Justice Complaint Against Google	In August 2024, a federal judge ruled Alphabet had an illegal monopoly in the search market. The judge has yet to rule on remedies. The judge expects a ruling by August 2025. Potential remedies could include breaking up pieces of Alphabet/Google. It could also include barring Google's payments for search engine exclusivity, for example, with Apple.	Google currently pays Apple roughly \$20 billion annually for search engine exclusivity in products like the Safari browser, Spotlight search, and Siri. If Google is no longer able to pay for search engine exclusivity, it would reduce the firm's payments to Apple for exclusivity in Safari and iOS.	We don't expect near-term hits to Apple from the case. We expect a lengthy appeals process regardless of a pending decision. If exclusivity arrangements were to be prohibited, we would expect a reduction to Google's payments to Apple. We'd expect Google could still pay to be an option in Apple products. We would expect as much as a 20% reduction in annual payments.

Source: Morningstar, European Commission, US Department of Justice.

Overall, we expect Apple to moderately open up its closed ecosystem in response to these antitrust measures, but we don't expect a material weakening of its moat or growth opportunity. We believe it can increase interoperability while still offering a superior integration case with its own products. We are extremely skeptical of any steeper impact, like a potential breakup, resulting from antitrust complaints. In our base case, we assume Apple faces pressure on its App Store revenue from existing regulation in Europe and proactively defending against potential future antitrust regulation in the US. We don't model a hit to Google's payments in our base case, given the high uncertainty and drawn-out appeals process we expect in this case regardless of an initial judgment.

In our bear-case scenario, we model more aggressive repercussions for Apple, assuming certain measures get implemented from each of these antitrust issues. We model these disparate hits in Exhibit 26, but the headline is that we see roughly 8% of our base-case Apple valuation at risk from antitrust

scrutiny alone. Primarily, we expect harsher hits to Google's payments and App Store revenue than in our base case.

Exhibit 26 Antitrust Consequences Pose 8% Downside Risk to Our Apple Valuation in Our Bear Case

Valuation Scenario/Effect	Google Payments	App Store Revenue
Base Case (\$200)	We model no impact from Google's antitrust case in our base case. Outcomes are too uncertain, and likely won't have any impact in the next three years.	We model a declining fee share for Apple from App Store sales in response to existing and pending regulation. From a roughly 30% cut today, we have this fee sharing drop to 25% at the end of the decade, with further declines thereafter.
Bear Case (\$175)	We model a 20% reduction to Google's payments to Apple in fiscal 2026. Google can no longer pay for exclusivity, but will still pay to be an option and disincentivize Apple from building its own search engine.	We model a more steeply declining fee share for Apple from App Store sales, resulting from the combination of the DMA in Europe and the DOJ case in the US. From a roughly 30% cut today, we have this fee sharing drop to 20% by 2030.
Revenue Impact	FY26: \$6 billion less revenue than our base case. FY29: \$8 billion less revenue than our base case.	FY29: \$10 billion less revenue than our base case.
EPS Impact	FY26: 5% lower EPS than our base case. FY29: 5% lower EPS than our base case.	FY29: 4% lower EPS than our base case.
Combined Impact	<p>Nearly <u>1% lower revenue growth</u> through FY29</p> <p><u>2% lower EPS growth</u> through FY29</p> <p>8% downside risk to our base case FY29 EPS estimate</p> <p><u>8% downside risk to our valuation</u></p>	

Source: Morningstar analyst estimates.

Even With Differing Views, Investors May Still Find Apple Overvalued

In closing, we assess Apple's valuation using a sensitivity table, shown in Exhibit 27, examining fiscal 2026 EPS outcomes and multiples applied to fiscal 2026 earnings. Apple's current valuation against FactSet consensus median EPS expectations for fiscal 2026 remains inflated, in our view. All of our scenarios imply a lower multiple than what the market implies today, but with differing outcomes based on our scenarios for future earnings potential.

We find it useful for investors to consider this sensitivity table when assessing their own earnings expectations compared with ours or those implied by the market. We reiterate our recommendation for investors to underweight their exposure to Apple, considering the high multiple currently being applied and the downside risks that could manifest regarding the impact of Apple's AI strategy and antitrust risks.

We believe investors may take a more bullish or bearish view on fundamentals than we do in regard to the future impact of AI on Apple's revenue growth and the potential hits from antitrust regulation. In outlining our bull- and bear cases, we strive to provide investors with a view into Apple's drivers and risks. We believe this sensitivity analysis should prove helpful in weighing forward-looking fundamental analysis against where shares are trading. **III**

Exhibit 27 Our Primary Point of Differentiation on Apple's Valuation Remains Its High Multiple Against Fiscal 2026 Earnings Expectations

		P/E Multiple															
AAPL		20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
FY26 EPS	\$ 7.00	\$ 140.00	\$ 147.00	\$ 154.00	\$ 161.00	\$ 168.00	\$ 175.00	\$ 182.00	\$ 189.00	\$ 196.00	\$ 203.00	\$ 210.00	\$ 217.00	\$ 224.00	\$ 231.00	\$ 238.00	\$ 245.00
	\$ 7.10	\$ 142.00	\$ 149.10	\$ 156.20	\$ 163.30	\$ 170.40	\$ 177.50	\$ 184.60	\$ 191.70	\$ 198.80	\$ 205.90	\$ 213.00	\$ 220.10	\$ 227.20	\$ 234.30	\$ 241.40	\$ 248.50
	\$ 7.20	\$ 144.00	\$ 151.20	\$ 158.40	\$ 165.60	\$ 172.80	\$ 180.00	\$ 187.20	\$ 194.40	\$ 201.60	\$ 208.80	\$ 216.00	\$ 223.20	\$ 230.40	\$ 237.60	\$ 244.80	\$ 252.00
	\$ 7.30	\$ 146.00	\$ 153.30	\$ 160.60	\$ 167.90	\$ 175.20	\$ 182.50	\$ 189.80	\$ 197.10	\$ 204.40	\$ 211.70	\$ 219.00	\$ 226.30	\$ 233.60	\$ 240.90	\$ 248.20	\$ 255.50
	\$ 7.40	\$ 148.00	\$ 155.40	\$ 162.80	\$ 170.20	\$ 177.60	\$ 185.00	\$ 192.40	\$ 199.80	\$ 207.20	\$ 214.60	\$ 222.00	\$ 229.40	\$ 236.80	\$ 244.20	\$ 251.60	\$ 259.00
	\$ 7.50	\$ 150.00	\$ 157.50	\$ 165.00	\$ 172.50	\$ 180.00	\$ 187.50	\$ 195.00	\$ 202.50	\$ 210.00	\$ 217.50	\$ 225.00	\$ 232.50	\$ 240.00	\$ 247.50	\$ 255.00	\$ 262.50
	\$ 7.60	\$ 152.00	\$ 159.60	\$ 167.20	\$ 174.80	\$ 182.40	\$ 190.00	\$ 197.60	\$ 205.20	\$ 212.80	\$ 220.40	\$ 228.00	\$ 235.60	\$ 243.20	\$ 250.80	\$ 258.40	\$ 266.00
	\$ 7.70	\$ 154.00	\$ 161.70	\$ 169.40	\$ 177.10	\$ 184.80	\$ 192.50	\$ 200.20	\$ 207.90	\$ 215.60	\$ 223.30	\$ 231.00	\$ 238.70	\$ 246.40	\$ 254.10	\$ 261.80	\$ 269.50
	\$ 7.80	\$ 156.00	\$ 163.80	\$ 171.60	\$ 179.40	\$ 187.20	\$ 195.00	\$ 202.80	\$ 210.60	\$ 218.40	\$ 226.20	\$ 234.00	\$ 241.80	\$ 249.60	\$ 257.40	\$ 265.20	\$ 273.00
	\$ 7.90	\$ 158.00	\$ 165.80	\$ 173.60	\$ 181.40	\$ 189.20	\$ 197.00	\$ 204.80	\$ 212.60	\$ 220.40	\$ 228.20	\$ 236.00	\$ 243.80	\$ 251.60	\$ 259.40	\$ 267.20	\$ 275.00
	\$ 8.00	\$ 160.00	\$ 167.80	\$ 175.60	\$ 183.40	\$ 191.20	\$ 199.00	\$ 206.80	\$ 214.60	\$ 222.40	\$ 230.20	\$ 238.00	\$ 245.80	\$ 253.60	\$ 261.40	\$ 269.20	\$ 277.00
	\$ 8.10	\$ 162.00	\$ 170.10	\$ 178.20	\$ 186.30	\$ 194.40	\$ 202.50	\$ 210.60	\$ 218.70	\$ 226.80	\$ 234.90	\$ 243.00	\$ 251.10	\$ 259.20	\$ 267.30	\$ 275.40	\$ 283.50
	\$ 8.20	\$ 164.00	\$ 172.20	\$ 180.40	\$ 188.60	\$ 196.80	\$ 205.00	\$ 213.20	\$ 221.40	\$ 229.60	\$ 237.80	\$ 246.00	\$ 254.20	\$ 262.40	\$ 270.60	\$ 278.80	\$ 287.00
	\$ 8.30	\$ 166.00	\$ 174.30	\$ 182.60	\$ 190.90	\$ 199.20	\$ 207.50	\$ 215.80	\$ 224.10	\$ 232.40	\$ 240.70	\$ 249.00	\$ 257.30	\$ 265.60	\$ 273.90	\$ 282.20	\$ 290.50
	\$ 8.40	\$ 168.00	\$ 176.40	\$ 184.80	\$ 193.20	\$ 201.60	\$ 210.00	\$ 218.40	\$ 226.80	\$ 235.20	\$ 243.60	\$ 252.00	\$ 260.40	\$ 268.80	\$ 277.20	\$ 285.60	\$ 294.00
	\$ 8.50	\$ 170.00	\$ 178.50	\$ 187.00	\$ 195.50	\$ 204.00	\$ 212.50	\$ 221.00	\$ 229.50	\$ 238.00	\$ 246.50	\$ 255.00	\$ 263.50	\$ 272.00	\$ 280.50	\$ 289.00	\$ 297.50
	\$ 8.60	\$ 172.00	\$ 180.60	\$ 189.20	\$ 197.80	\$ 206.40	\$ 215.00	\$ 223.60	\$ 232.20	\$ 240.80	\$ 249.40	\$ 258.00	\$ 266.60	\$ 275.20	\$ 283.80	\$ 292.40	\$ 301.00
	\$ 8.70	\$ 174.00	\$ 182.70	\$ 191.40	\$ 200.10	\$ 208.80	\$ 217.50	\$ 226.20	\$ 234.90	\$ 243.60	\$ 252.30	\$ 261.00	\$ 269.70	\$ 278.40	\$ 287.10	\$ 295.80	\$ 304.50
	\$ 8.80	\$ 176.00	\$ 184.80	\$ 193.60	\$ 202.40	\$ 211.20	\$ 220.00	\$ 228.80	\$ 237.60	\$ 246.40	\$ 255.20	\$ 264.00	\$ 272.80	\$ 281.60	\$ 290.40	\$ 299.20	\$ 308.00
	\$ 8.90	\$ 178.00	\$ 186.90	\$ 195.80	\$ 204.70	\$ 213.60	\$ 222.50	\$ 231.40	\$ 240.30	\$ 249.20	\$ 258.10	\$ 267.00	\$ 275.90	\$ 284.80	\$ 293.70	\$ 302.60	\$ 311.50
\$ 9.00	\$ 180.00	\$ 189.00	\$ 198.00	\$ 207.00	\$ 216.00	\$ 225.00	\$ 234.00	\$ 243.00	\$ 252.00	\$ 261.00	\$ 270.00	\$ 279.00	\$ 288.00	\$ 297.00	\$ 306.00	\$ 315.00	
\$ 9.10	\$ 182.00	\$ 191.10	\$ 200.20	\$ 209.30	\$ 218.40	\$ 227.50	\$ 236.60	\$ 245.70	\$ 254.80	\$ 263.90	\$ 273.00	\$ 282.10	\$ 291.20	\$ 300.30	\$ 309.40	\$ 318.50	
\$ 9.20	\$ 184.00	\$ 193.20	\$ 202.40	\$ 211.60	\$ 220.80	\$ 230.00	\$ 239.20	\$ 248.40	\$ 257.60	\$ 266.80	\$ 276.00	\$ 285.20	\$ 294.40	\$ 303.60	\$ 312.80	\$ 322.00	
\$ 9.30	\$ 186.00	\$ 195.30	\$ 204.60	\$ 213.90	\$ 223.20	\$ 232.50	\$ 241.80	\$ 251.10	\$ 260.40	\$ 269.70	\$ 279.00	\$ 288.30	\$ 297.60	\$ 306.90	\$ 316.20	\$ 325.50	
\$ 9.40	\$ 188.00	\$ 197.40	\$ 206.80	\$ 216.20	\$ 225.60	\$ 235.00	\$ 244.40	\$ 253.80	\$ 263.20	\$ 272.60	\$ 282.00	\$ 291.40	\$ 300.80	\$ 310.20	\$ 319.60	\$ 329.00	
\$ 9.50	\$ 190.00	\$ 199.50	\$ 209.00	\$ 218.50	\$ 228.00	\$ 237.50	\$ 247.00	\$ 256.50	\$ 266.00	\$ 275.50	\$ 285.00	\$ 294.50	\$ 304.00	\$ 313.50	\$ 323.00	\$ 332.50	
\$ 9.60	\$ 192.00	\$ 201.60	\$ 211.20	\$ 220.80	\$ 230.40	\$ 240.00	\$ 249.60	\$ 259.20	\$ 268.80	\$ 278.40	\$ 288.00	\$ 297.60	\$ 307.20	\$ 316.80	\$ 326.40	\$ 336.00	
\$ 9.70	\$ 194.00	\$ 203.70	\$ 213.40	\$ 223.10	\$ 232.80	\$ 242.50	\$ 252.20	\$ 261.90	\$ 271.60	\$ 281.30	\$ 291.00	\$ 300.70	\$ 310.40	\$ 320.10	\$ 329.80	\$ 339.50	
\$ 9.80	\$ 196.00	\$ 205.80	\$ 215.60	\$ 225.40	\$ 235.20	\$ 245.00	\$ 254.80	\$ 264.60	\$ 274.40	\$ 284.20	\$ 294.00	\$ 303.80	\$ 313.60	\$ 323.40	\$ 333.20	\$ 343.00	
\$ 9.90	\$ 198.00	\$ 207.90	\$ 217.80	\$ 227.70	\$ 237.60	\$ 247.50	\$ 257.40	\$ 267.30	\$ 277.20	\$ 287.10	\$ 297.00	\$ 306.90	\$ 316.80	\$ 326.70	\$ 336.60	\$ 346.50	
\$ 10.00	\$ 200.00	\$ 210.00	\$ 220.00	\$ 230.00	\$ 240.00	\$ 250.00	\$ 260.00	\$ 270.00	\$ 280.00	\$ 290.00	\$ 300.00	\$ 310.00	\$ 320.00	\$ 330.00	\$ 340.00	\$ 350.00	

Source: Morningstar analyst estimates.

Appendix

Exhibit 28 We Expect High-Single-Digit Revenue Growth and Low-Teen Earnings Growth for Apple Through Fiscal 2029

Fiscal Year	Actual		Estimates					5Y CAGR
	2023	2024	2025	2026	2027	2028	2029	
iPhone	200,583	201,183	210,729	225,870	238,081	251,189	264,958	5.7%
<i>iPhone growth y/y %</i>	-2.4%	0.3%	4.7%	7.2%	5.4%	5.5%	5.5%	
iPhone % of revenue	52.3%	51.4%	50.4%	49.9%	49.3%	48.8%	48.3%	
Mac	29,357	29,984	32,563	35,642	37,540	39,133	40,375	6.1%
<i>Mac growth y/y %</i>	-26.9%	2.1%	8.6%	9.5%	5.3%	4.2%	3.2%	
Mac % of revenue	7.7%	7.7%	7.8%	7.9%	7.8%	7.6%	7.4%	
iPad	28,300	26,694	27,706	28,903	29,837	30,798	31,789	3.6%
<i>iPad growth y/y %</i>	-3.4%	-5.7%	3.8%	4.3%	3.2%	3.2%	3.2%	
iPad % of revenue	7.4%	6.8%	6.6%	6.4%	6.2%	6.0%	5.8%	
Wearables, Home and Accessories	39,845	37,005	39,028	43,234	46,530	50,461	54,118	7.9%
<i>Wearables growth y/y %</i>	-3.4%	-7.1%	5.5%	10.8%	7.6%	8.4%	7.2%	
Wearables % of revenue	10.4%	9.5%	9.3%	9.5%	9.6%	9.8%	9.9%	
Services	85,200	96,169	108,414	119,350	130,950	143,329	156,838	10.3%
<i>Services growth y/y %</i>	9.1%	12.9%	12.7%	10.1%	9.7%	9.5%	9.4%	
Services % of revenue	22.2%	24.6%	25.9%	26.3%	27.1%	27.8%	28.6%	
Apple revenue	383,285	391,035	418,441	452,999	482,937	514,910	548,078	7.0%
<i>Apple revenue growth y/y %</i>	-2.8%	2.0%	7.0%	8.3%	6.6%	6.6%	6.4%	
Gross profit	169,148	180,683	195,475	214,034	231,967	251,272	270,996	
Gross margin %	44.1%	46.2%	46.7%	47.2%	48.0%	48.8%	49.4%	
Research and development	29,915	31,370	33,803	36,507	39,427	42,582	45,988	8.0%
<i>Research and development growth y/y %</i>	14.0%	4.9%	7.8%	8.0%	8.0%	8.0%	8.0%	
Research and development % of revenue	7.8%	8.0%	8.1%	8.1%	8.2%	8.3%	8.4%	
Selling, general, and administrative	24,932	26,097	27,629	29,287	31,044	32,906	34,881	6.0%
<i>Selling, general, and administrative growth y/y %</i>	-0.6%	4.7%	5.9%	6.0%	6.0%	6.0%	6.0%	
Selling, general, and administrative % of revenue	6.5%	6.7%	6.6%	6.5%	6.4%	6.4%	6.4%	
Operating profit	114,301	123,216	134,043	148,241	161,496	175,784	190,128	
Operating margin %	29.8%	31.5%	32.0%	32.7%	33.4%	34.1%	34.7%	
Non-GAAP EPS	\$ 6.13	\$ 6.75	\$ 7.49	\$ 8.60	\$ 9.77	\$ 11.13	\$ 12.61	13.3%
<i>Non-GAAP EPS growth y/y %</i>	0.3%	10.1%	10.9%	14.8%	13.7%	13.9%	13.3%	

Source: Company documents, Morningstar analyst estimates.

Research Methodology for Valuing Companies

Overview

At the heart of our valuation system is a detailed projection of a company's future cash flows, resulting from our analysts' research. Analysts create custom industry and company assumptions to feed income statement, balance sheet, and capital investment assumptions into our globally standardized, proprietary discounted cash flow, or DCF, modeling templates. We use scenario analysis, in-depth competitive advantage analysis, and a variety of other analytical tools to augment this process. We think analyzing valuation through discounted cash flows presents a better lens for viewing cyclical companies, high-growth firms, businesses with finite lives (mines, for example), or companies expected to generate negative earnings over the next few years. That said, we don't dismiss multiples altogether but rather use them as supporting cross-checks for our DCF-based fair value estimates. We also acknowledge that DCF models offer their own challenges (including a potential proliferation of estimated inputs and the possibility that the method may miss short-term market-price movements), but we believe these negatives are mitigated by deep analysis and our long-term approach.

Morningstar's Equity Research Group ("we," "our") believes that a company's intrinsic worth results from the future cash flows it can generate. The Morningstar Rating for stocks identifies stocks trading at a discount or premium to their intrinsic worth—or fair value estimate in Morningstar terminology. Five-star stocks sell for the biggest risk-adjusted discount to their fair values, whereas 1-star stocks trade at premiums to their intrinsic worth.

Four key components drive the Morningstar rating:

- ▶ our assessment of the firm's economic moat.
- ▶ our estimate of the stock's fair value.
- ▶ our uncertainty around that fair value estimate.
- ▶ the current market price.

This process ultimately culminates in our single-point star rating.

Economic Moat

The Morningstar Economic Moat Rating is a structural feature that Morningstar believes positions a firm to earn durable excess profits over a long period of time, with excess profits defined as returns on invested capital above our estimate of a firm's cost of capital. The economic moat rating is not an indicator of the investment performance of the investment highlighted in this report. Narrow-moat companies are those that Morningstar believes are more likely than not to achieve normalized excess returns for at least the next 10 years. Wide-moat companies are those that Morningstar believes will earn excess returns for 10 years, with excess returns more likely than not to remain for at least 20 years. Firms without a moat, including those that have a substantial threat of value destruction-related risks related to environmental, social, and governance; industry disruption; financial health; or other idiosyncratic issues, are more susceptible to competition. Morningstar has identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.

Fair Value Estimate

Each stock's fair value is estimated by using a proprietary discounted cash flow model, which assumes that the stock's value is equal to the total of the free cash flows of the company is expected to generate in the future, discounted back to the present at the rate commensurate with the riskiness of the cash flows. As with any DCF model, the ending value is highly sensitive to Morningstar's projections of future growth.

Fair Value Uncertainty

The Morningstar Uncertainty Rating represents the analysts' ability to bound the estimated value of the shares in a company around the fair value estimate, based on the characteristics of the business underlying the stock, including operating and financial leverage, sales sensitivity to the overall economy, product concentration, pricing power, exposure to material ESG risks, and other company-specific factors. Based on these factors, analysts classify the stock into one of several uncertainty levels: Low, Medium, High, Very High, or Extreme. Our recommended margin of safety—the discount to fair value demanded before we'd recommend buying or selling the stock—widens as our uncertainty of the estimated value of the equity increases.

Market Price

The market prices used in this analysis and noted in the report come from exchanges on which the stock is listed, which we believe is a reliable source.

Morningstar Rating for Stocks

The Morningstar Rating for Stocks is a forward-looking, analyst-driven measure of a stock's current price relative to the analyst's estimate of what the shares are worth. Stock star ratings indicate whether a stock, in the equity analyst's educated opinion, is cheap, expensive, or fairly priced. To rate a stock, analysts estimate what they think it is worth (its "fair value"), using a detailed, long-term cash flow forecast for the company. A stock's star rating depends on whether its current market price is above or below the fair value estimate. Those stocks trading at large discounts to their fair values receive the highest ratings (4 or 5 stars). Stocks trading at large premiums to their fair values receive lower ratings (1 or 2 stars). A 3-star rating means the current stock price is close to the analyst's fair value estimate.

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