Amazon.com Inc AMZN ★★★★ 3 Feb 2023 05:14, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
112.91 USD 2 Feb 2023	137.00 USD 3 Feb 2023 05:12, UTC	0.82	1.07 USD Tril 2 Feb 2023	Wide	Stable	High	Exemplary	1 Feb 2023 06:00, UTC

Dan Romanoff
Senior Equity Analyst
Morningstar
+1 312 244 7816
dan.romanoff@morningstar.com

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Reporting Currency: USD | Trading Currency: USD
Currency amounts expressed with "$" are in U.S. dollars (USD) unless otherwise denoted.

[1]The ESG Risk Rating Assessment is a representation of Sustainalytics' ESG Risk Rating.

Solid Results for Amazon With Continued AWS Deceleration in January; Outlook Light; FVE Cut to $137

Analyst Note Dan Romanoff, Senior Equity Analyst, 3 Feb 2023

Wide-moat Amazon reported solid fourth-quarter results, but provided a first-quarter outlook that was shy of our expectations. E-commerce was generally solid while AWS continues to decelerate, including through January. We see real progress being made on the operational side, which was masked by impairment charges. We still foresee healthy long-term growth driven by e-commerce proliferation, Amazon Web Services, or AWS, and advertising, but the near term remains a work-in-progress with macro issues weighing on 2023, albeit with improvement in 2024. We cut our estimates on both the top and bottom lines for 2023, while leaving the rest of our estimates largely unchanged. In turn, we cut our fair value estimate to $137 per share from $150. Still, we see shares as attractive.

Fourth-quarter revenue grew 9% year over year as reported, or 12% in constant currency, to $149.2 billion, compared with guidance of $140 billion to $148 billion. Currency improved during the quarter, which eased pressure on revenue growth. Compared with our model, online stores was light, while third-party seller services was well ahead, and other segments were in line to slightly ahead. From a retail perspective (all year over year, as reported), revenue from online stores declined 2%, physical stores improved 6%, third-party seller services grew 20%, and subscription services increased 13%. On the latter point, we're impressed that Rings of Power helped draw in new Prime members.

The two most critical segments, AWS and advertising, grew 20% and 19% over the year-ago period, respectively. Management sees good customer additions within AWS and notes positive conversations about moving new

Financial Summary and Key Statistics

	Actual		Forecast	
	2021	2022	2023	2024
Revenue (USD Mil)	469,822	513,983	545,336	607,352
Revenue Growth %	21.7	9.4	6.1	11.4
Operating Income (Mil)	24,879	12,248	11,747	22,593
Operating Margin %	5.3	2.4	2.2	3.7
Adjusted EBITDA (Mil)	71,932	73,330	82,561	98,872
Adjusted EBITDA Margin %	15.3	14.3	15.1	16.3
Earnings Per Share (Diluted) (USD)	3.24	-0.27	0.94	1.75
Adjusted Earnings Per Share (Diluted) (USD)	3.24	-0.27	0.94	1.75
Adjusted EPS Growth %	55.0	-108.2	-454.0	85.7
Price/Earnings	51.5	-311.1	120.1	64.5
Price/Book	12.4	5.9	7.5	6.8
EV/EBITDA	23.0	23.6	14.8	12.4
Free Cash Flow Yield %	-0.9	-1.0	2.2	3.6

Source: Morningstar Valuation Model. Data as of 02 Feb 2023.

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Sector Consumer Cyclical

Industry Internet Retail

Business Description

Amazon is a leading online retailer and one of the highest-grossing e-commerce aggregators, with $386 billion in net sales and approximately $578 billion in estimated physical/digital online gross merchandise volume in 2021. Retail-related revenue represents approximately 80% of the total, followed by Amazon Web Services' cloud computing, storage, database, and other offerings (10%-15%), advertising services (5%), and other. International segments constitute 25%-30% of Amazon's non-AWS sales, led by Germany, the United Kingdom, and Japan.

workloads to the cloud. However, enterprise customers continue to optimize cloud spending, consistent with comments from other cloud providers. Management believes this will continue for at least a couple quarters, noting that AWS growth was in the midteens year over year for the month of January.

Despite further deceleration this quarter, AWS remains critical to Amazon's overall revenue growth in the near term and long-term. Like Microsoft noted earlier this week, Amazon is in discussions with customers to help them optimize spending and consumption on public cloud services. Management noted that new customers are being added and new workloads are planned, but nonetheless expects depressed revenue expansion to persist at least through midyear. Microsoft also expects a lag between customer optimization efforts and new workload migration.

We think we are in the early innings of cloud migration, while management disclosed that it believes 90% to 95% of enterprise workloads remain on-premises. Strong backlog growth gives us comfort that the runway for AWS remains long. We also think cloud migration is an obvious cost-cutting move for enterprise customers, which we think puts a floor under growth even if the economy formally descends into a recession. We continue to believe that the migration to the public cloud is an enormous opportunity and remains in the early stages of evolution, with AWS being the clear leader.

Operating profit came in at $2.7 billion, compared with guidance of $0.0 billion to $4.0 billion, producing an operating margin of 1.8%, compared with 2.5% a year ago. Impairment charges stemming from self-insurance liabilities, impairments of property and equipment and operating leases, and estimated severance costs totaled $2.7 billion. In other words, normalized operating profit was $5.4 billion, which was nicely ahead of the top end of guidance. Amazon continues to make progress on its excess expenses, particularly in improvements to the productivity of the fulfillment network and transportation. Management plans to continue to optimize operations throughout 2023.

While guidance was slightly shy of our model, we are not surprised given the macro environment. However, we think the continued deceleration in January AWS will be unnerving to investors. Amazon’s first-quarter outlook includes $121 billion to $126 billion in revenue and operating income from breakeven to $4.0 billion, compared with FactSet consensus estimates of $125.5 billion and $4.0 billion, respectively. Guidance assumes 210 basis points of pressure from currency impacts. Included in operating profit guidance is $640 million of severance costs. which renders profitability guidance better than it appears at first glance. We see a path to continuous margin improvement over time, even as uncertain macro conditions weigh in the near term.

Business Strategy & Outlook Dan Romanoff, Senior Equity Analyst, 3 Feb 2023

Amazon dominates its served markets, notably e-commerce and cloud services. It benefits from numerous competitive advantages and has emerged as the clear e-commerce leader thanks to its size and scale, which yield an unmatched selection of low-priced goods for consumers. The secular drift toward e-commerce continues

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unabated with the company continuing to grind out market share gains despite its size. Prime ties Amazon's e-commerce efforts together and provides a steady stream of high-margin recurring revenue from customers who purchase more frequently from Amazon's properties. In return, consumers get one-day shipping on millions of items, exclusive video content, and other services; this results in a powerful virtuous circle where customers and sellers attract one another. Kindle and other devices further bolster the ecosystem by helping attract new customers while making the value proposition irresistible in retaining existing customers. Through Amazon Web Services, Amazon is also a clear leader in public cloud services.

Additionally, the firm's advertising business is already large and continues to scale, thus offering an attractive option for marketers looking to access a vast audience with a variety of proprietary data points about those very consumers. AWS and advertising growth should continue to outpace e-commerce growth. We expect these areas to be the main growth drivers over the next five years. This is critical, as each of these segments drives higher margins than the corporate average, which in turn should allow both operating profit and EPS to outgrow revenue as margins continue to expand.

From a retail perspective, we expect continued innovation to help drive further share gains in a post-lockdown world. We also look for continued penetration into categories such as groceries and luxury goods that have not previously translated into the same level of success as other retail categories. We also see technology advancements in AWS and a bigger push to service enterprise customers as helping to maintain the company's lead there. Overall, we see strong revenue and free cash flow growth for years to come.

Bulls Say Dan Romanoff, Senior Equity Analyst, 3 Feb 2023

- Amazon is the clear leader in e-commerce and enjoys unrivaled scale to continue to invest in growth opportunities and drive the very best customer experience.
- High-margin advertising and AWS are growing faster than the corporate average, which should continue to boost profitability over the next several years.
- Amazon Prime memberships help attract and retain customers who spend more with Amazon; this reinforces a powerful network effect while bringing in recurring and high-margin revenue.

Bears Say Dan Romanoff, Senior Equity Analyst, 3 Feb 2023

- Regulatory concerns are rising for large technology firms, including Amazon. Further, the firm may face increasing regulatory and compliance issues as it expands internationally.
- New investments, notably in fulfillment, delivery, and AWS, should damp free cash flow growth. Also, Amazon's penetration into some countries might be harder than in the U.S. due to inferior logistic networks.
- Amazon may not be as successful in penetrating new retail categories, such as luxury goods, due to consumer preferences and an improved e-commerce experience from larger retailers.

Fair Value and Profit Drivers Dan Romanoff, Senior Equity Analyst, 3 Feb 2023

Our fair value estimate for Amazon is $137 per share, which implies a 2022 enterprise value to sales multiple of 3 times and a 1.7% free cash flow yield. We think multiples are a little less meaningful for Amazon given the ongoing heavy investment and rapid scaling that depresses financial performance. However, we expect the company to significantly grow its free cash flow as it matures.

Over the long term, we expect e-commerce to continue to take share from brick-and-mortar retailers. We further expect Amazon to gain share online. We believe that over the medium term, COVID-19 pulled forward some demand by changing consumer behavior and better penetrating some retail categories, such as groceries, pharmacy, and luxury goods, that previously had not gained as much traction online. We think Prime subscriptions and the accompanying benefits, combined with selection, price, and convenience continue to drive the retail story. We also see international as being a longer-term opportunity within retail. We model total retail-related revenue growing at a 7% CAGR over the next five years.

We believe the critical growth drivers over the medium term will be AWS and advertising. Since these segments earn materially higher margins than the rest of the business, we also expect them to drive margins higher over time. Over the next five years, we project AWS revenue growing at a 18% CAGR and advertising revenue growing at a 17% CAGR. In total, Amazon should grow at a 10% CAGR through 2027. We model GAAP operating margin expanding from 2% (actual) in 2021 to 6% in 2027 as the company grows into its expanded footprint and optimizes its substantial investment in transportation.

Economic Moat Dan Romanoff, Senior Equity Analyst, 3 Jun 2022

We assign a wide moat rating to Amazon based on network effects, cost advantages, intangible assets, and switching costs. Amazon has been disrupting the traditional retail industry for more than two decades while also emerging as the leading infrastructure-as-a-service provider via Amazon Web Services. This disruption has been embraced by consumers and has driven change across the entire industry as traditional retailers have invested heavily in technology in order to keep pace. COVID-19 has accelerated change, and given the company's technological prowess, massive scale, and relationship with consumers, we think Amazon has widened its lead, which we believe will result in economic returns well in excess of its cost of capital for years to come.

We believe Amazon's retail business has a wide moat stemming from network effects associated with its marketplace, where more buyers and sellers continually attract more buyers and sellers; a cost advantage tied to purchasing power, logistics, vertical integration (proprietary brands, owned delivery, and so on), and a negative cash conversion cycle; and intangible assets associated with technology and branding. We also believe AWS is a wide-moat business, thanks to high customer switching costs; a cost advantage associated with economies of scale where few competitors can keep up with Amazon's investment pace; intangible assets arising from semiconductor and facility development; and a network effect associated with a marketplace for software created to make AWS work better. We also would assign Amazon's burgeoning advertising business a narrow moat based on intangible assets from its proprietary data on hundreds of millions of users and a network effect again focusing on buyers and sellers meeting in the largest available venues. We believe that the wide moat for Amazon's entire business is greater than the sum of its parts; we prefer to analyze Amazon's moat on the whole, as the company's segments reinforce one another and returns result in an unrivaled consumer experience.

Together, we believe Amazon's retail business enjoys a wide moat supported by cost advantages, intangible assets, and network effects. We assess the moat around Amazon's retail business based on a combination of online stores, third-party seller services, subscription services, and physical stores, as we find it challenging to think about durable competitive advantages for each of these segments in isolation. Given its massive scale, Amazon has created cost advantages including buying power, economies of scope, route density, and research and development. From a total gross merchandise value perspective, with approximately $580 billion in 2021, it finally surpassed Walmart. Similarly, Amazon is the largest online retailer and is an order of magnitude larger than Walmart and 4 times larger than Shopify, assuming we classify Shopify as a demand aggregator. Additionally, the company has become more vertically integrated over time and most recently has built out its own transportation network. Size dictates certain scales of efficiency, but we think Amazon is the definition of operational excellence.

These advantages are related and reinforce one another in a virtuous circle. Low prices and an unmatched selection have come to define the company in consumer's minds, giving rise to intangible assets from branding and technology (search capabilities and recommendation engine). Product searches are more likely to begin on Amazon at this point than they are Google. Amazon has become the only demand aggregator at scale in the U.S. because of its wide selection, intelligent recommendation algorithms, low prices, and convenience, which combine into a powerful business model.

We also believe Amazon's retail business benefits from network effects. The sheer number of consumers shopping on Amazon makes it attractive to third party sellers, while the marketplace expands the selection available to shoppers and makes Amazon a more attractive online destination for consumers. In fact, 50%-55% of total goods sold by Amazon are through its third-party marketplace. At the heart of third-party seller services is the commission Amazon collects from the independent seller. However, these services also include Fulfillment by Amazon, distribution facility storage, shipping, payment processing, and other related items.

To improve the consumer experience and more tightly tie users to Amazon, the company has moved increasingly into content. Consumers can now have Prime Video, Music Unlimited, Kindle Unlimited, Prime Gaming, and other similar subscription services. The company even produces original content for Prime Video to help reinforce the notion that consumers can get anything they need from Amazon. We view the Kindle, Echo, Fire, and other Amazon original devices as interesting on their own merits, but think the underlying point is to once again draw in more consumers to Amazon's retail properties and engage those customers that are already within the ecosystem. Amazon's hardware helps to enable Amazon's services. The Kindle, for example, dovetails perfectly with Kindle Unlimited, which for a $9.99 monthly subscription, allows users to read from a selection of more than one million book titles. The company even offers a direct-to-Kindle book publishing service.

The common thread that weaves throughout Amazon's retail business is Amazon Prime, which for $139 per year allows users unlimited free shipping on millions of stock-keeping units, including same-day or one-day shipping on many items, access to Prime Video and Prime Music, and a variety of other benefits. We view Prime subscriptions and the differentiated user experience they offer as critical to attracting and retaining customers. Prime memberships generate high cash flow that can be reinvested in further improving the user experience on the technology, content, and delivery fronts. Prime customers are very sticky and tend to purchase from Amazon more frequently and across more retail categories. We think content combined with Prime subscriptions actually build a switching cost that consumers would need to overcome, although these switching costs might not last for decades in order to warrant it as a moat source.

Advertising is tangentially related to Amazon's retail operations in that it takes place on Amazon's own online properties. Advertising is growing rapidly and is likely the segment with the highest operating margins in Amazon's portfolio, likely in excess of 30%, which is would be directionally comparable to margins earned by Facebook when it was a similarly sized business (other was $21 billion in revenue in 2020, compared with $18 billion in revenue for Facebook in 2015). We believe advertising dollars flow to where the eyeballs are and where information is known about the online user, which fits in very well with Amazon's strengths. We therefore expect advertising to grow rapidly over the next several years and continue to boost the company's overall profitability.

Looking at advertising in isolation, we would likely give it a narrow moat rating based on intangible assets arising from proprietary technology (data), and network effects, although assigning a moat rating here is difficult because Amazon doesn't disclose much about this business. That said, we can see Amazon's advertising becoming a wide-moat business as it becomes more established and more details are disclosed. We think Amazon's advertising business is attractive to advertisers because there is proprietary information about the consumers and real-time data about when they are searching for a particular product, and Amazon already enjoys substantial traffic. We expect this business to continue to grow rapidly and offer an attractive alternative to platforms from social network and internet search providers.

Amazon Web Services enjoys a wide moat supported by switching costs, network effects, intangible assets, and cost advantages. Amazon was a pioneer in public cloud infrastructure as a service and platform as a service and retains a substantial lead over its closest rival, Microsoft. AWS has driven profitability for the entire company; although it represents 10%-15% of revenue, it generates 60%-65% of total operating profit dollars for Amazon. We also expect AWS to remain a key growth driver for the company over the next decade.

AWS differs from the company's e-commerce operations in that it is enterprise-facing rather than consumer-facing. Enterprise customers rely on AWS for core IT infrastructure, which represents significant switching costs in terms of the time and expense of integrating applications with core software elements, such as the database, and dedicates a user to a specific set of software development tools. Ultimately, the operational risks to changing mission-critical technology infrastructure is high, which is why core elements such as ERP systems and cloud providers are rarely changed.

Further, we believe it is cheaper initially for companies to move workloads to the cloud, as there are fewer up-front costs and a lower bar to clear for maintenance and administration. Additionally, Amazon has devoted significant R&D resources to adding advanced features to the platform. Along those lines, AWS offers scale advantages to clients in that it is cheaper and faster to set up IT infrastructure in the cloud compared with undertaking the same effort independently. Customers also benefit from the ability to scale up compute power for burst requirements, paying for only what they need and having it available effectively on-demand. We have seen some of the largest technology companies in the world simply fail to keep pace with Amazon's massive investments in IaaS over the years, and AWS' cost advantage over its rivals is obvious. Those firms struggle to compete in a meaningful way against AWS.

Amazon has amassed significant technology and process knowledge, which we believe is an intangible asset for the firm as a whole and also for AWS. These assets could also apply to the logistics aspect of the retail business. The company expanded its distribution network by roughly 50% in 2020 while managing through a global pandemic. Given the size of its footprint, this is a monumental achievement and speaks to the company's ability to quickly plan, construct, and expand facilities based on specific needs. The knowledge base to quickly and efficiently bring massive server farms on line for AWS is similarly impressive and only comes from the experience of previously building hyperscale data centers. Additionally, the firm designs its own semiconductors, which are used to power its server arrays, and also developed proprietary robotic automation technology used in its fulfillment centers.

As with other large software companies, we see a network effect within AWS' ecosystem for third-party software, although we view this as more of secondary moat source. The large ecosystem of AWS users has benefited from the software development efforts of those same users, as they turn around and offer applications written on AWS for AWS users. Thus, users help attract other users to AWS. We see Microsoft and Salesforce in particular as the best comparable examples in software of creating network effects.

We think network effects, intangible assets, cost advantages, and switching combine to form a powerful moat for all of Amazon. We think many of these areas reinforce one another and see little difficulty in Amazon continuing to deliver returns on invested capital well in excess of its cost of capital over the long term.

Moat Trend Dan Romanoff, Senior Equity Analyst, 3 Jun 2022

We assign Amazon a stable moat trend rating. From an e-commerce perspective, we believe the trend skews positive because of secular shifts to online commerce from traditional brick-and-mortar retailers. After more than 20 years of online shopping, this is not necessarily sneaking up on investors. However, new or less penetrated retail categories can help fuel this long-term trend. We highlight groceries, apparel, pharmacy, and furniture as some examples of areas that are gaining traction for online commerce—and for Amazon—from a small base. Online grocery shopping, in particular, has seen an uptick in demand due to COVID-19; we think there will be a lasting impact, while luxury items are likely still a long-term project but an opportunity for Amazon nonetheless. On the flip side, we see larger retailers getting their e-commerce houses in order and foresee greater e-commerce competition over time. We also see "buy online, pick up in store" and contactless curbside pickup as innovations being made by physical stores. While the selection, low cost, and Prime member benefits would push us to declare a positive moat trend, the general competition for shopping attention and discretionary dollars keeps our moat trend rating stable for cost advantages, network effects, and intangible assets. We do not view Amazon's expansion into physical retail, either via its own stores or via Whole Foods, as a sign that Amazon's retail moat is skewing positive.

We believe the moat trend for AWS is also stable. AWS has grown rapidly and is the clear public cloud leader. That said, its largest competitor, Microsoft's Azure, has narrowed the gap over the last several years in terms of features, services, and sheer size. We view this more as the natural evolution of the competitive landscape and not as shortcomings of AWS. Indeed, the company has clearly continued to invest in AWS and add to the service. We continue to believe that AWS will be a core growth engine for Amazon's revenue and profitability over the next decade, as the public cloud market opportunity remains substantial.

Given the lack of disclosure surrounding the advertising business, we assign a stable trend to this segment. However, given its rapid rise, we believe more optimism is possibly warranted. As advertising dollars continue to shift to online channels, Amazon has clearly benefited in a meaningful way. The company has added to its offsite capabilities, while the onsite inventory remains the key driver, as advertisers value eyeballs and data. We believe that Amazon's advertising business is growing approximately as fast as Facebook revenue was growing when Facebook was the size of Amazon's other business and is growing considerably faster than Google was at the same scale. Overall, we see clear share gains in online advertising, which we think are a result of years of investing in and building out the firm's advertising platform, but the opaque disclosures around the business keep us from definitively identifying a positive moat trend around its proprietary data and technology.

Risk and Uncertainty Dan Romanoff, Senior Equity Analyst, 3 Jun 2022

We believe that the uncertainty for Amazon is high and that despite being an e-commerce leader, the company faces a variety of risks.

Amazon must protect its leading online retailing position, which can be challenging as consumer preferences change, especially post-COVID-19 (as consumers may revert to prior behaviors), and traditional retailers bolster their online presence. Maintaining an e-commerce edge has pushed the company to make investments in nontraditional areas, such as producing content for Prime Video and building out its own transportation network. Similarly, the company must also maintain an attractive value proposition for its third-party sellers. Some of these investment areas have raised investor questions in the past, and we expect management to continue to invest according to its strategy, despite periodic margin pressure from increased spending.

The company must also continue to invest in new offerings. AWS, transportation, and physical stores (both Amazon branded and Whole Foods) are three notable areas of investment. These decisions require capital allocation and management focus and may play out over a period of years rather than quarters.

Continued international expansion will likely require similar investment and management attention but will also increase exposure to different regulatory environments. Some countries have instituted or may institute protectionist policies. Even domestically over the last several years, lawmakers from both parties have increasingly focused on the amount of market power large technology companies have accrued. Antitrust, data privacy, and section 230 have been repeatedly invoked.

From an environmental, social, and governance perspective, data breaches and service outages are a concern for any type of cloud service provider. As a retailer, Amazon has personal information for hundreds of millions of consumers around the world, while AWS hosts proprietary mission-critical data for enterprises.

Financial Strength Dan Romanoff, Senior Equity Analyst, 3 Feb 2023

We believe Amazon is financially sound. Revenue is growing rapidly, margins are expanding, the company has unrivaled scale, and the balance sheet is in great shape. In our view, the marketplace will remain attractive to third-party sellers, as Prime continues to tightly weave consumers to Amazon. We also see AWS and advertising driving overall corporate growth and continued margin expansion.

As of Dec. 31, 2022, Amazon had $70.0 billion in cash and marketable securities, offset by $67.2 billion in debt. We also expect free cash flow generation, which suffered during COVID-19 as the company invested heavily in facility expansion, content creation, and its transportation network, to return to more normal levels over the next couple of years.

Given that the company is still in a rapid growth and heavy investment phase, we do not expect it to pay dividends or repurchase shares. The company is acquisitive, but given its size, we characterize all acquisitions throughout its history as tuck-in, including the largest deal of $14 billion for Whole Foods in 2017 and the $8 billion MGM deal in 2022. We expect the focus to remain on growth, including heavy investment for AWS and delivery.

Capital Allocation Dan Romanoff, Senior Equity Analyst, 3 Feb 2023

We assign Amazon an Exemplary capital allocation rating. The rating reflects our assessments of a sound balance sheet, exceptional investments, and appropriate shareholder distributions. We think reinvestment in the business is most likely to be the key driver of total shareholder returns and is therefore appropriately prioritized over other capital returns such as dividends and buybacks, which Amazon does not offer.

The balance sheet is sound with a net cash position. We expect the balance sheet to remain sound as the company has typically maintained a conservative position and has historically generated substantial free cash flow from AWS and advertising to fund growth throughout the business.

Management's record of investing in areas that investors were initially skeptical of but were ultimately vindicated has been remarkable. Jeff Bezos founded the company in 1994 and led it until he stepped down as CEO in 2021. He was succeeded by Andy Jassy, former CEO of AWS. Bezos remains actively involved with the company as executive chair of the board, and Jassy has been at the company for 23 years and was a driving force behind the foundation and growth of AWS. We think Jassy will carry on Bezos' focus on the customer and continue to explore areas that were ignored or not yet defined. Thus far, the results have been breathtaking. From humble beginnings, Bezos built Amazon into one of the largest companies in the world. On the e-commerce side, the

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company has evolved from selling books to selling everything, including groceries, delivering purchases the same day they are ordered, and moving into retail categories that were long thought to be beyond the reach of online shopping. The stickiness of Prime members, the financial stability of subscriptions, the tech world shakeup via AWS, the Kindle—the innovation has been dramatic, and shareholders have been rewarded along the way.

Ultimately, we assess investment as exceptional.

Amazon's capital deployment strategy centers around reinvesting in the business and making generally small tuck-in acquisitions. The company does not pay a dividend or repurchase shares, nor do we expect it to over the next several years.

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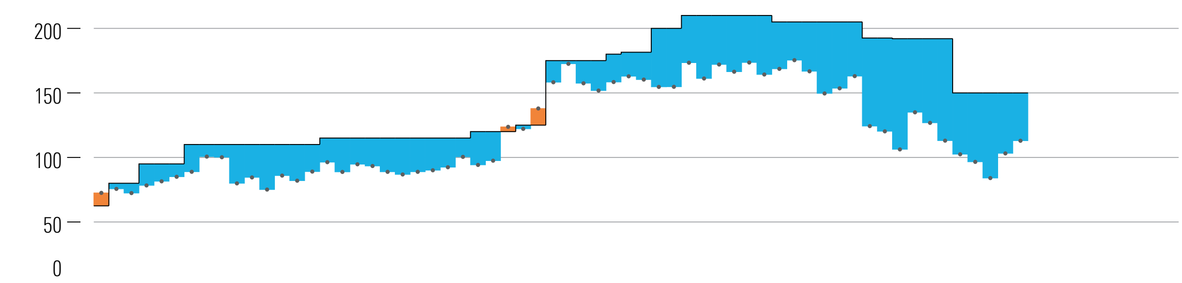
Price vs. Fair Value

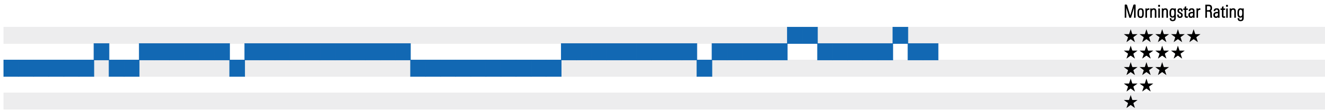


Fair Value: 137.00
3 Feb 2023 05:12, UTC

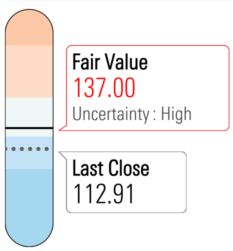
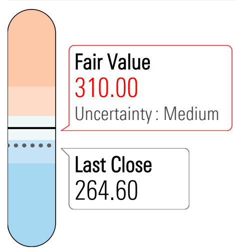
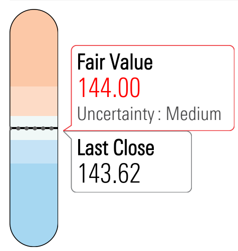
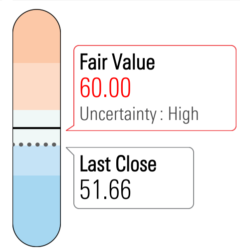
Last Close: 112.91
Over Valued
Under Valued

2018	2019	2020	2021	2022	YTD	
0.68	0.80	0.90	0.81	0.56	0.82	Price/Fair Value
28.43	23.03	76.26	2.38	-49.62	34.42	Total Return %

Morningstar Rating



Competitors

	Amazon.com Inc AMZN	Microsoft Corp MSFT	Walmart Inc WMT	eBay Inc EBAY
				
	Fair Value 137.00 Uncertainty : High; Last Close 112.91	Fair Value 310.00 Uncertainty : Medium; Last Close 264.60	Fair Value 144.00 Uncertainty : Medium; Last Close 143.62	Fair Value 60.00 Uncertainty : High; Last Close 51.66
Economic Moat	Wide	Wide	Wide	Narrow
Moat Trend	Stable	Stable	Stable	Negative
Currency	USD	USD	USD	USD
Fair Value	137.00 3 Feb 2023 05:12, UTC	310.00 3 Feb 2023 05:12, UTC1	144.00 3 Feb 2023 05:12, UTC2	60.00 3 Feb 2023 05:12, UTC3
1-Star Price	212.35	418.50	194.40	93.00
5-Star Price	82.20	217.00	100.80	36.00
Assessment	Under Valued 2 Feb 2023	Under Valued 2 Feb 2023	Fairly Valued 2 Feb 2023	Under Valued 2 Feb 2023
Morningstar Rating	★★★★3 Feb 2023 05:14, UTC	★★★★2 Feb 2023 22:29, UTC	★★★2 Feb 2023 22:29, UTC	★★★★2 Feb 2023 22:29, UTC
Analyst	Dan Romanoff, Senior Equity Analyst	Dan Romanoff, Senior Equity Analyst	Zain Akbari, Equity Analyst	Sean Dunlop, Equity Analyst
Capital Allocation	Exemplary	Exemplary	Standard	Standard
Price/Fair Value	0.82	0.85	1.00	0.86
Price/Sales	2.24	9.72	0.66	3.01
Price/Book	7.89	10.76	5.36	5.78
Price/Earnings	—	29.40	44.19	—
Dividend Yield	—	0.96%	1.56%	1.70%
Market Cap	1,072.70 Bil	1,881.42 Bil	390.15 Bil	27.35 Bil
52-Week Range	81.43—170.83	213.43—315.95	117.27—160.77	35.92—60.66
Investment Style	Large Growth	Large Growth	Large Value	Mid Core

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Amazon.com Inc AMZN ★★★★ 3 Feb 2023 05:14, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
112.91 USD 2 Feb 2023	137.00 USD 3 Feb 2023 05:12, UTC	0.82	1.07 USD Tril 2 Feb 2023	Wide	Stable	High	Exemplary	1 Feb 2023 06:00, UTC

Morningstar Valuation Model Summary

Financials as of 02 Feb 2023	Actual			Forecast				
Fiscal Year, ends 31 Dec	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Revenue (USD Mil)	386,064	469,822	513,983	545,336	607,352	673,289	743,075	817,464
Operating Income (USD Mil)	22,899	24,879	12,248	11,747	22,593	31,173	40,795	51,909
EBITDA (USD Mil)	48,150	59,175	53,709	58,929	72,548	82,747	95,782	109,458
Adjusted EBITDA (USD Mil)	57,358	71,932	73,330	82,561	98,872	100,798	115,392	130,688
Net Income (USD Mil)	21,331	33,364	-2,722	9,797	18,329	25,372	33,167	42,364
Adjusted Net Income (USD Mil)	21,331	33,364	-2,722	9,797	18,329	25,372	33,167	42,364
Free Cash Flow To The Firm (USD Mil)	18,358	-35,416	-31,177	22,568	13,990	25,176	34,251	44,055
Weighted Average Diluted Shares Outstanding (Bil)	10	10	10	10	11	11	11	11
Earnings Per Share (Diluted) (USD)	2.09	3.24	-0.27	0.94	1.75	2.42	3.16	4.03
Adjusted Earnings Per Share (Diluted) (USD)	2.09	3.24	-0.27	0.94	1.75	2.42	3.16	4.03
Dividends Per Share (USD)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Margins & Returns as of 02 Feb 2023		Actual			Forecast					
	3 Year Avg	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**5 Year Avg**
Operating Margin %	4.5	5.9	5.3	2.4	2.2	3.7	4.6	5.5	6.4	4.5
EBITDA Margin %	—	12.5	12.6	10.5	10.8	12.0	12.3	12.9	13.4	—
Adjusted EBITDA Margin %	14.8	14.9	15.3	14.3	15.1	16.3	15.0	15.5	16.0	15.6
Net Margin %	4.0	5.5	7.1	-0.5	1.8	3.0	3.8	4.5	5.2	3.7
Adjusted Net Margin %	4.0	5.5	7.1	-0.5	1.8	3.0	3.8	4.5	5.2	3.7
Free Cash Flow To The Firm Margin %	-2.9	4.8	-7.5	-6.1	4.1	2.3	3.7	4.6	5.4	4.0

Growth & Ratios as of 02 Feb 2023		Actual			Forecast					
	3 Year CAGR	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**5 Year CAGR**
Revenue Growth %	22.4	37.6	21.7	9.4	6.1	11.4	10.9	10.4	10.0	9.7
Operating Income Growth %	-5.6	57.5	8.6	-50.8	-4.1	92.3	38.0	30.9	27.2	33.5
EBITDA Growth %	0.0	—	—	—	—	—	—	—	—	0.0
Adjusted EBITDA Growth %	19.3	32.8	25.4	1.9	12.6	19.8	2.0	14.5	13.3	12.3
Earnings Per Share Growth %	-161.4	—	—	—	—	—	—	—	—	—
Adjusted Earnings Per Share Growth %	-161.4	81.8	55.0	-108.2	-454.0	85.7	38.4	30.7	27.7	—

Valuation as of 02 Feb 2023	Actual			Forecast				
	2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Price/Earnings	77.9	51.5	-311.1	120.1	64.5	46.7	35.7	28.0
Price/Sales	2.4	3.5	3.3	2.1	1.9	1.7	1.6	1.4
Price/Book	17.8	12.4	5.9	7.5	6.8	5.9	5.1	4.3
Price/Cash Flow	35.5	-111.2	-100.5	46.6	28.2	26.2	21.0	17.3
EV/EBITDA	16.3	23.0	23.6	14.8	12.4	12.1	10.6	9.3
EV/EBIT	40.9	66.4	141.4	104.0	54.1	39.2	29.9	23.5
Dividend Yield %	—	—	—	—	—	—	—	—
Dividend Payout %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Free Cash Flow Yield %	2.8	-0.9	-1.0	2.2	3.6	3.8	4.8	5.8

Operating Performance / Profitability as of 02 Feb 2023	Actual			Forecast				
Fiscal Year, ends 31 Dec	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
ROA %	7.8	9.0	-0.6	2.1	3.6	4.6	5.5	6.3
ROE %	27.4	28.8	-1.9	6.5	11.1	13.6	15.4	16.7
ROIC %	30.3	25.6	12.3	13.6	15.8	14.2	15.0	16.4

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Amazon.com Inc AMZN ★★★★ 3 Feb 2023 05:14, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
112.91 USD 2 Feb 2023	137.00 USD 3 Feb 2023 05:12, UTC	0.82	1.07 USD Tril 2 Feb 2023	Wide	Stable	High	Exemplary	1 Feb 2023 06:00, UTC

Financial Leverage	**Actual**			**Forecast**				
Fiscal Year, ends 31 Dec	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Debt/Capital %	25.4	26.1	31.5	30.3	27.7	23.8	19.8	17.3
Assets/Equity	3.4	3.0	3.2	3.1	3.0	2.9	2.7	2.6
Net Debt/EBITDA	-1.1	-0.8	-0.1	-0.4	-0.6	-0.8	-1.1	-1.3
Total Debt/EBITDA	0.6	0.7	0.9	0.8	0.7	0.6	0.5	0.4
EBITDA/ Net Interest Expense	34.8	39.8	31.0	33.6	40.7	42.8	51.8	63.9

Key Valuation Drivers as of 02 Feb 2023	
Cost of Equity %	9.0
Pre-Tax Cost of Debt %	5.5
Weighted Average Cost of Capital %	8.8
Long-Run Tax Rate %	21.0
Stage II EBI Growth Rate %	8.4
Stage II Investment Rate %	-47.2
Perpetuity Year	20

Additional estimates and scenarios available for download at https://pitchbook.com/.

Discounted Cash Flow Valuation as of 02 Feb 2023	**USD Mil**
Present Value Stage I	317,062
Present Value Stage II	601,448
Present Value Stage III	494,586
Total Firm Value	**1,413,096**
Cash and Equivalents	70,026
Debt	-67,150
Other Adjustments	1
Equity Value	**1,415,973**
Projected Diluted Shares	10
Fair Value per Share (USD)	**137.00**

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Amazon.com Inc AMZN ★★★★ 3 Feb 2023 05:14, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
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Income Statement (USD)	Actual			Forecast				
Fiscal Year, ends 31 Dec	2020	2021	2022	2023	2024	2025	2026	2027
Revenue (Mil)	**386,064**	**469,822**	**513,983**	**545,336**	**607,352**	**673,289**	**743,075**	**817,464**
Cost of Goods Sold (Mil)	233,307	272,344	288,831	313,568	348,013	383,775	421,695	461,867
Gross Profit (Mil)	**152,757**	**197,478**	**225,152**	**231,768**	**259,339**	**289,514**	**321,380**	**355,597**
Selling, General, Administrative & Other Expenses (Mil)	129,932	172,537	211,641	219,530	236,260	257,870	280,139	303,279
Advertising & Marketing Expenses	—	—	—	—	—	—	—	—
Research & Development	—	—	—	—	—	—	—	—
Depreciation & Amortization (if reported separately)	—	—	—	—	—	—	—	—
Adjusted Operating Income (Mil)	**22,899**	**24,879**	**12,248**	**11,747**	**22,593**	**31,173**	**40,795**	**51,909**
Financial Non-Cash (Gains)/Losses (Mil)	0	0	0	0	0	0	0	0
Irregular Cash (Gains)/Losses (Mil)	0	0	0	0	0	0	0	0
Operating Income (Mil)	**22,899**	**24,879**	**12,248**	**11,747**	**22,593**	**31,173**	**40,795**	**51,909**
Net Interest Expense (Mil)	-1,279	-13,272	18,184	-654	-607	-943	-1,189	-1,717
Income Tax Expense (Mil)	2,863	4,791	-3,217	2,604	4,872	6,744	8,817	11,261
After-Tax Items (Mil)	0	0	0	0	0	0	0	0
(Minority Interest) (Mil)	16	4	-3	0	0	0	0	0
Net Income (Mil)	**21,331**	**33,364**	**-2,722**	**9,797**	**18,329**	**25,372**	**33,167**	**42,364**
Adjusted Net Income (Mil)	**21,331**	**33,364**	**-2,722**	**9,797**	**18,329**	**25,372**	**33,167**	**42,364**
Weighted Average Diluted Shares Outstanding (Bil)	10	10	10	10	11	11	11	11
Diluted Earnings Per Share	**2.09**	**3.24**	**-0.27**	**0.94**	**1.75**	**2.42**	**3.16**	**4.03**
Diluted Adjusted Earnings Per Share	**2.09**	**3.24**	**-0.27**	**0.94**	**1.75**	**2.42**	**3.16**	**4.03**
Dividends Per Common Share (USD)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EBITDA (Mil)	**48,150**	**59,175**	**53,709**	**58,929**	**72,548**	**82,747**	**95,782**	**109,458**
Adjusted EBITDA (Mil)	**57,358**	**71,932**	**73,330**	**82,561**	**98,872**	**100,798**	**115,392**	**130,688**

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Amazon.com Inc AMZN ★★★★ 3 Feb 2023 05:14, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
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Key Cash Flow Items (USD)	**Actual**			**Forecast** as of 2 Feb				
Fiscal Year, ends 31 Dec	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Cash from Working Capital (Mil)	31,549	-1,313	1,893	5,171	6,951	9,542	10,110	10,739
(Capital Expenditures) (Mil)	-40,141	-61,053	-63,645	-61,078	-60,735	-60,596	-63,161	-65,397
Depreciation (Mil)	25,251	34,296	41,461	46,419	49,196	50,901	54,319	56,896
Amortization (Mil)	—	—	—	763	759	673	669	654
Net New (Investment), Organic (Mil)	**-1,409**	**-46,368**	**-43,070**	**13,524**	**-3,618**	**876**	**2,354**	**3,393**
(Purchases)/Sales of Companies & Assets (Mil)	2,771	3,672	-2,992	-1,000	-1,000	-1,000	-1,000	-1,000
Net New (Investment), Total (Mil)	**1,362**	**-42,696**	**-46,062**	**12,524**	**-4,618**	**-124**	**1,354**	**2,393**
Other Non-Cash Items, From Cash Flows (Mil)	-2,653	-14,169	17,426	763	759	673	669	654
Free Cash Flow to the Firm (Mil)	**18,358**	**-35,416**	**-31,177**	**22,568**	**13,990**	**25,176**	**34,251**	**44,055**

Balance Sheet (USD)	**Actual**			**Forecast**				
Fiscal Year, ends 31 Dec	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Assets								
Cash and Equivalents (Mil)	42,122	36,220	53,888	77,628	90,887	112,619	142,768	188,179
Inventory (Mil)	23,795	32,640	34,405	37,800	41,952	46,263	50,834	55,677
Accounts Receivable (Mil)	24,542	32,891	42,360	37,352	41,599	46,116	50,896	55,991
Net Property, Plant and Equipment (Mil)	113,114	160,281	186,715	201,384	212,933	222,639	231,491	240,003
Goodwill (Mil)	15,017	15,371	20,288	20,538	20,788	21,038	21,288	21,538
Other Intangibles (Mil)	0	0	0	-63	-123	-96	-65	-19
Other Operating Assets (Mil)	60,331	83,317	108,881	95,434	103,250	111,093	118,892	126,707
Non-Operating Assets (Mil)	0	0	0	0	0	0	0	0
Total Assets (Mil)	**321,195**	**420,549**	**462,675**	**486,209**	**527,425**	**575,810**	**632,242**	**704,214**
Liabilities								
Accounts Payable (Mil)	72,539	78,664	79,600	88,057	95,346	105,144	115,533	126,539
Debt (Mil)	31,816	48,744	67,150	67,804	66,593	62,404	57,362	57,362
Other Operating Liabilities (Mil)	123,436	154,896	169,882	174,507	191,316	208,720	226,638	245,239
Non-Operating Liabilities (Mil)	0	0	0	0	0	0	0	0
Total Liabilities (Mil)	**227,791**	**282,304**	**316,632**	**330,368**	**353,255**	**376,268**	**399,533**	**429,140**
Equity								
Shareholders' Equity (Mil)	93,404	138,245	146,043	155,841	174,171	199,542	232,709	275,074
Minority Interest (Mil)	0	0	0	0	0	0	0	0
Total Equity (Mil)	**93,404**	**138,245**	**146,043**	**155,841**	**174,171**	**199,542**	**232,709**	**275,074**

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Management & Ownership

Management Activity as of 31 Mar 2022

Name	Position	Share Held	Report Date*	Insider Activity
Wendell P. Weeks	Independent Director	1,935	31 Mar 2022	380
Andrew R. Jassy	Director, President and Chief Executive Officer	1,988,380	31 Dec 2022	302,569
Jeffrey P. Bezos	Executive Chairman of the Board	992,633,688	31 Dec 2022	4,586,455
Patricia Q. Stonesifer	Independent Director	46,220	31 Dec 2022	14,299
Shelley L. Reynolds	Vice President, Worldwide Controller, and Principal Accounting Officer	129,200	31 Dec 2022	22,953
Jamie S. Gorelick	Independent Director	28,836	31 Dec 2022	5,756
Jonathan J. Rubinstein	Lead Independent Director	124,880	31 Dec 2022	14,299
Edith W. Cooper	Independent Director	6,180	31 Dec 2022	3,800
David A. Zapolsky	Senior Vice President, General Counsel and Secretary	133,220	31 Dec 2022	105,042
Brian T. Olsavsky	Senior Vice President and Chief Financial Officer	148,260	31 Dec 2022	109,733

Fund Ownership as of 31 Jan 2023

Top Owners	% of Shares Held	% of Fund Assets	Change (k)	Portfolio Date
Vanguard US Total Market Shares ETF	2.59	2.04	2,696,043	31 Dec 2022
Vanguard Total Stock Market Index Fund	2.59	1.92	2,696,043	31 Dec 2022
Vanguard Instl Ttl Stck Mkt Idx Tr	2.53	2.76	3,585,594	30 Sep 2022
Vanguard 500 Index Fund	2.01	2.31	2,076,427	31 Dec 2022
Invesco QQQ Trust	1.00	6.72	-461,136	31 Jan 2023
Concentrated Holders				
Amazon (AMZN) Yield Shares Prps ETF	0.00	—	235	31 Jan 2023
Tarpon US Equities I FIA IE	0.00	27.02	42	30 Sep 2022
iShares S&P 500 Cnsmr Discr Sect ETF	0.01	25.15	0	30 Jan 2023
ProFund VP Consumer Services	0.00	24.94	382	30 Sep 2022
Consumer Discret Sel Sect SPDR® Fd	0.34	24.83	-125,349	31 Jan 2023

Institutional Transactions as of 31 Jan 2023

Top 5 Buyers	% of Shares Held	% of Fund Assets	Shrs Bought/Sold (k)	Portfolio Date
FMR Inc	2.96	3.56	16,008,843	30 Sep 2022
T. Rowe Price Investment Management,Inc.	0.15	1.42	15,772,420	30 Sep 2022
Wellington Management Company LLP	0.72	1.77	14,685,084	30 Sep 2022
Vanguard Group Inc	6.88	2.33	12,456,995	30 Sep 2022
Susquehanna International Group, LLP	0.24	0.73	9,597,517	30 Sep 2022
Top 5 Sellers				
T. Rowe Price Associates, Inc.	2.77	5.24	-29,369,893	30 Sep 2022
Allianz Asset Management AG	0.07	1.69	-10,580,148	30 Sep 2022
HHG PLC	0.32	2.73	-6,377,103	30 Sep 2022
JPMorgan Chase & Co	0.99	1.63	-6,254,171	30 Sep 2022
BlackRock Inc	5.71	2.24	-5,331,976	30 Sep 2022

*Represents the date on which the owner's name, position, and common shares held were reported by the holder or issuer.

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Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

Valuation Analysis as of 02 Feb 2023

Company/Ticker	Price/Earnings 2022	2023(E)	2024(E)	EV/EBITDA 2022	2023(E)	2024(E)	Price/Free Cash Flow 2022	2023(E)	2024(E)	Price/Book 2022	2023(E)	2024(E)	Price/Sales 2022	2023(E)	2024(E)
Microsoft Corp MSFT	28.5	24.6	22.0	17.8	15.8	14.2	27.5	23.0	20.4	9.6	8.0	6.7	9.4	8.5	7.7
Walmart Inc WMT	23.4	21.3	19.3	12.1	11.5	10.8	25.8	26.3	23.1	5.1	4.9	4.6	0.6	0.6	0.6
eBay Inc EBAY	14.0	12.6	12.3	8.7	10.3	10.4	17.9	18.3	13.6	4.5	9.8	8.6	3.8	2.9	3.0
Average	22.0	19.5	17.9	12.9	12.5	11.8	23.7	22.5	19.0	6.4	7.6	6.6	4.6	4.0	3.8
Amazon.com Inc AMZN	**-311.1**	**120.1**	**64.5**	**23.6**	**14.8**	**12.4**	**-100.0**	**46.5**	**28.2**	**5.9**	**7.5**	**6.8**	**3.3**	**2.1**	**1.9**

Returns Analysis as of 02 Feb 2023

Company/Ticker	ROIC % 2022	2023(E)	2024(E)	Adjusted ROIC % 2022	2023(E)	2024(E)	Return on Equity % 2022	2023(E)	2024(E)	Return on Assets % 2022	2023(E)	2024(E)	Dividend Yield % 2022	2023(E)	2024(E)
Microsoft Corp MSFT	33.2	34.2	35.4	46.1	48.4	50.8	37.3	35.2	33.0	17.9	18.3	18.0	1.0	1.1	1.2
Walmart Inc WMT	15.0	15.7	16.3	12.1	12.7	13.3	12.5	23.2	24.4	4.1	7.1	7.6	1.6	1.7	1.9
eBay Inc EBAY	31.3	84.2	34.9	94.6	280.2	109.1	204.0	-23.4	56.5	59.3	-6.8	9.9	1.1	1.7	1.9
Average	26.5	44.7	28.9	50.9	113.8	57.7	84.6	11.7	38.0	27.1	6.2	11.8	1.2	1.5	1.7
Amazon.com Inc AMZN	**12.3**	**13.6**	**15.8**	**11.4**	**12.6**	**14.7**	**-1.9**	**6.5**	**11.1**	**-0.6**	**2.1**	**3.6**	**—**	**—**	**—**

Growth Analysis as of 02 Feb 2023

Company/Ticker	Revenue Growth % 2022	2023(E)	2024(E)	EBIT Growth % 2022	2023(E)	2024(E)	EPS Growth % 2022	2023(E)	2024(E)	FCF Growth % 2022	2023(E)	2024(E)	DPS Growth % 2022	2023(E)	2024(E)
Microsoft Corp MSFT	5.5	10.4	10.7	2.7	12.7	11.7	1.0	15.5	12.0	122.2	-8.7	38.7	8.1	7.5	6.9
Walmart Inc WMT	6.0	3.3	3.2	-6.6	7.1	7.8	-5.0	9.7	10.9	-24.4	2.3	13.5	1.8	9.5	12.5
eBay Inc EBAY	1.5	-6.6	-3.2	7.8	-17.5	-1.1	-28.8	-13.6	2.4	113.2	-58.7	-59.3	12.5	22.2	11.5
Average	4.3	2.4	3.6	1.3	0.8	6.1	-10.9	3.9	8.4	70.3	-21.7	-2.4	7.5	13.1	10.3
Amazon.com Inc AMZN	**9.4**	**6.1**	**11.4**	**-50.8**	**-4.1**	**92.3**	**-108.2**	**-454.0**	**85.7**	**-12.0**	**-172.4**	**-38.0**	**—**	**—**	**—**

Profitability Analysis as of 02 Feb 2023

Company/Ticker	Gross Margin % 2022	2023(E)	2024(E)	EBITDA Margin % 2022	2023(E)	2024(E)	Operating Margin % 2022	2023(E)	2024(E)	Net Margin % 2022	2023(E)	2024(E)	FCF Margin % 2022	2023(E)	2024(E)
Microsoft Corp MSFT	68.5	68.6	69.0	51.9	52.8	53.2	40.9	41.8	42.2	33.2	34.5	34.7	34.2	37.0	37.8
Walmart Inc WMT	24.3	25.0	25.1	6.0	6.1	6.3	4.0	4.2	4.3	2.8	2.9	3.0	2.5	2.4	2.6
eBay Inc EBAY	74.6	72.7	72.9	37.7	32.7	33.5	28.1	24.8	25.3	30.2	23.5	22.3	21.2	15.8	21.9
Average	55.8	55.4	55.7	31.9	30.5	31.0	24.3	23.6	23.9	22.1	20.3	20.0	19.3	18.4	20.8
Amazon.com Inc AMZN	**43.8**	**42.5**	**42.7**	**14.3**	**15.1**	**16.3**	**2.4**	**2.2**	**3.7**	**-0.5**	**1.8**	**3.0**	**-3.3**	**4.5**	**6.7**

Leverage Analysis as of 02 Feb 2023

Company/Ticker	Debt/Equity % 2022	2023(E)	2024(E)	Debt/Total Cap % 2022	2023(E)	2024(E)	EBITDA/Net Int. Exp 2022	2023(E)	2024(E)	Total Debt/EBITDA 2022	2023(E)	2024(E)	Asset/Equity 2022	2023(E)	2024(E)
Microsoft Corp MSFT	21.4	17.3	13.8	17.6	14.7	12.1	-559.4	—	NM	0.4	0.3	0.3	2.0	1.9	1.8
Walmart Inc WMT	58.9	57.4	55.7	37.1	36.5	35.8	20.4	20.0	21.3	1.2	1.2	1.1	3.2	3.2	3.2
eBay Inc EBAY	92.9	268.6	248.7	48.2	72.9	71.3	14.6	13.6	13.0	2.3	2.5	2.4	2.7	5.9	5.6
Average	57.7	114.4	106.1	34.3	41.4	39.7	-174.8	16.8	17.1	1.3	1.3	1.3	2.6	3.7	3.5
Amazon.com Inc AMZN	**46.0**	**43.5**	**38.2**	**31.5**	**30.3**	**27.7**	**31.0**	**33.6**	**40.7**	**0.9**	**0.8**	**0.7**	**3.2**	**3.1**	**3.0**

Liquidity Analysis as of 02 Feb 2023

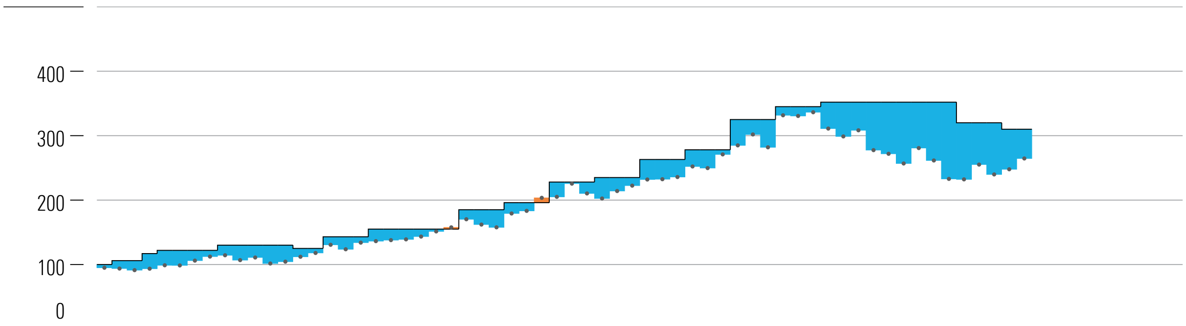
Company/Ticker	Cash per Share 2022	2023(E)	2024(E)	Current Ratio 2022	2023(E)	2024(E)	Quick Ratio 2022	2023(E)	2024(E)	Cash/Short-Term Debt 2022	2023(E)	2024(E)	Payout Ratio % 2022	2023(E)	2024(E)
Microsoft Corp MSFT	18.9	22.4	28.8	2.1	2.2	2.4	2.1	2.2	2.4	62.8	55.5	60.5	28.8	26.8	25.6
Walmart Inc WMT	5.1	4.5	4.2	0.9	0.9	0.8	0.3	0.2	0.2	—	—	—	61.2	36.5	37.0
eBay Inc EBAY	2.4	0.9	0.4	2.0	0.8	0.8	2.0	0.8	0.8	1.2	0.4	0.2	3.5	-33.0	29.1
Average	7.9	8.8	10.5	1.5	1.2	1.3	1.3	1.0	1.1	16.0	22.5	21.9	23.4	7.6	22.9
Amazon.com Inc AMZN	**5.3**	**7.4**	**8.7**	**0.9**	**1.0**	**1.1**	**0.7**	**0.8**	**0.8**	**—**	**34.0**	**27.1**	**0.0**	**0.0**	**0.0**

Morningstar Equity Company Report | Report as of 3 Feb 2023 05:20, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NASDAQ - ALL MARKETS

Amazon.com Inc AMZN ★★★★ 3 Feb 2023 05:14, UTC

Competitors Price vs. Fair Value

Microsoft Corp MSFT



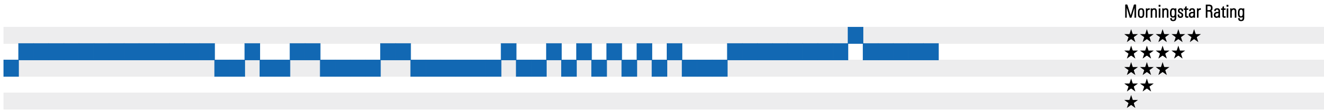
Fair Value: 310.00
25 Jan 2023 04:36, UTC

Last Close: 264.60

Over Valued
Under Valued

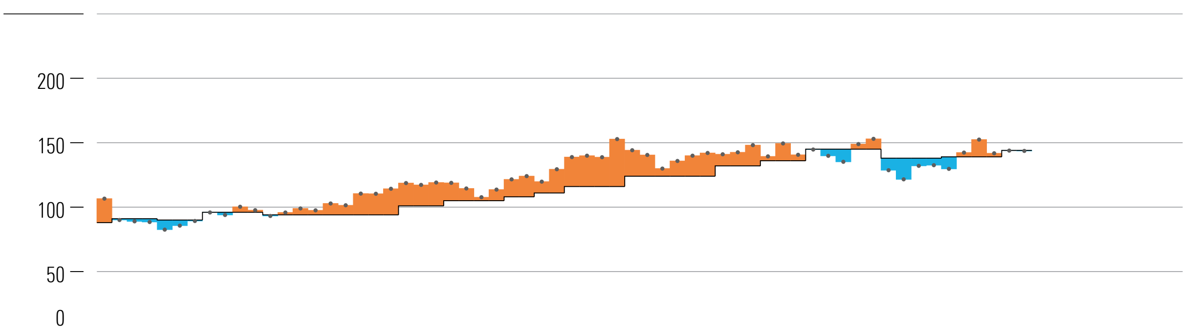
	2018	2019	2020	2021	2022	YTD	
	0.78	1.02	0.95	0.97	0.75	0.85	Price/Fair Value
	20.75	57.12	42.37	52.24	-27.94	10.33	Total Return %

Morningstar Rating



Total Return % as of 2 Feb 2023. Last Close as of 2 Feb 2023. Fair Value as of 25 Jan 2023 04:36, UTC.

Walmart Inc WMT



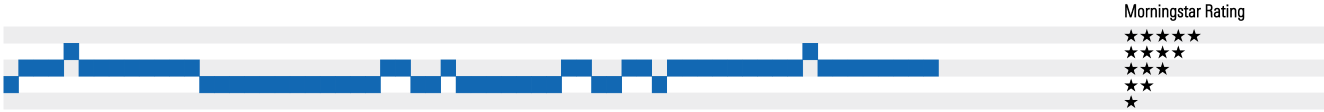
Fair Value: 144.00
31 Jan 2023 09:02, UTC

Last Close: 143.62

Over Valued
Under Valued

	2018	2019	2020	2021	2022	YTD	
	0.99	1.13	1.16	1.00	1.02	1.00	Price/Fair Value
	-3.56	29.86	23.12	1.90	-0.46	1.29	Total Return %

Morningstar Rating



Total Return % as of 2 Feb 2023. Last Close as of 2 Feb 2023. Fair Value as of 31 Jan 2023 09:02, UTC.

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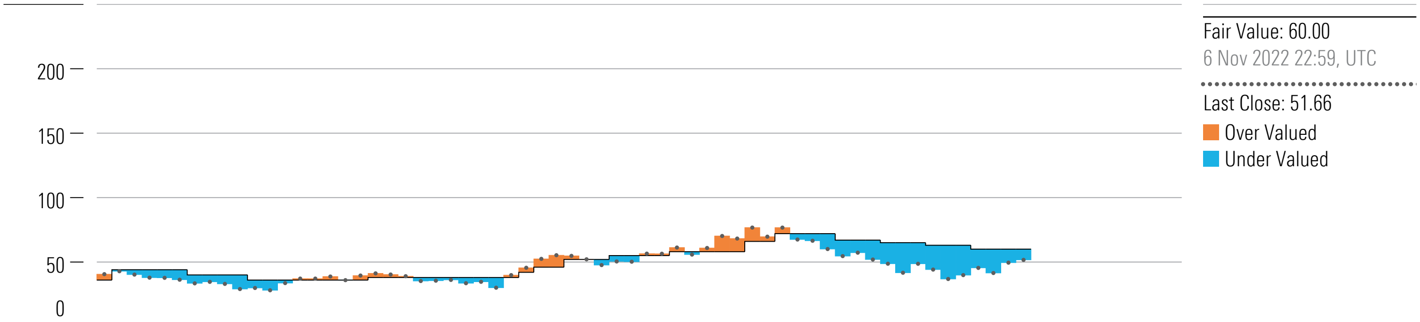
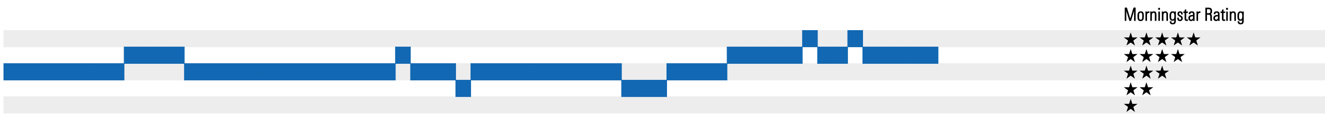
Amazon.com Inc AMZN ★★★★ 3 Feb 2023 05:14, UTC

Competitors Price vs. Fair Value (Continued)

eBay Inc EBAY



	2018	2019	2020	2021	2022	YTD	
	0.78	0.95	0.91	0.92	0.69	0.86	Price/Fair Value
	-25.62	30.64	40.93	33.77	-36.32	24.57	Total Return %



Total Return % as of 2 Feb 2023. Last Close as of 2 Feb 2023. Fair Value as of 6 Nov 2022 22:59, UTC.

Morningstar Equity Company Report | Report as of 3 Feb 2023 05:20, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NASDAQ - ALL MARKETS

Amazon.com Inc AMZN ★★★★ 3 Feb 2023 05:14, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
112.91 USD 2 Feb 2023	137.00 USD 3 Feb 2023 05:12, UTC	0.82	1.07 USD Tril 2 Feb 2023	Wide	Stable	High	Exemplary	1 Feb 2023 06:00, UTC

Recent Analyst Notes

Near-Term Pressure Not Unique to Amazon; Well-Positioned for Long-Term Growth; FVE Cut to $150 Dan Romanoff,Senior Equity Analyst,28 Oct 2022

Amazon reported disappointing third-quarter results and provided investors with soft fourth-quarter guidance, with the performance of AWS being our greatest near-term concern. This quarter stings, as this was supposed to be the quarter where Amazon had finally lapped pandemic-fueled issues. We continue to believe long-term growth driven by e-commerce proliferation, AWS, and advertising, but the near term is clouded by a variety of macroeconomic issues, including currency headwinds, high inflation, soaring energy costs, and deceleration in AWS. We can look through these issues but we believe they are likely to persist throughout 2023, which decreases our confidence over the medium term as well. We are lowering our growth and profitability assumptions, and in turn our fair value estimate drops to $150 per share, from $192 previously. Still, we are not ready to throw in the towel on Amazon and we see shares as attractive, but clearly the company has still not found stable footing on its path out of the pandemic.Third-quarter revenue grew 15% year over year as reported, or 19% in constant currency, to $127.1 billion, compared with guidance of $125 billion to $130 billion. Currency continued to worsen throughout the quarter, which crimped revenue growth. From a retail perspective, online stores grew 7% year over year as reported, physical stores improved 10%, third-party seller services grew 18%, and subscription services increased 9%. Prime Day was held in the third quarter of 2022, compared with the second quarter in 2022, which resulted in an artificial 400 basis points of revenue growth for Amazon this quarter. The two most critical segments, AWS and advertising, grew 27% and 25% over the year-ago period, respectively. AWS enjoyed strong backlog growth, but was proactively helping customers manage cloud computing costs as the economy slows. Compared with our model, online stores, subscription services, and AWS drove the revenue miss.

Amazon Shows Signs of Life With Solid Results and Guidance; FVE $192 Dan Romanoff,Senior Equity Analyst,29 Jul 2022

Amazon reported good second-quarter top-line and bottom-line results which were ahead of FactSet consensus expectations and provided an encouraging revenue outlook for the third quarter. While AWS remains a tremendous opportunity and performed well once again, the more important takeaway this quarter is that retail-related businesses, especially third-party seller services, are coming back and even delivered some upside compared with our expectations. We are not ready to declare victory for the company just yet, but we are encouraged by results and note that the pandemic-fueled growth surge is now removed from prior-year comparisons, so growth should optically improve going forward.We are maintaining our $192 fair value estimate for wide-moat Amazon. Even with shares up as much as 14% after hours, we continue to view shares as attractive, as Amazon remains one of our top picks.Second-quarter revenue grew 7% year over year as reported, or 10% in constant currency, to $121.2 billion, compared with guidance of $116 billion to $121 billion. The

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Amazon.com Inc AMZN ★★★★ 3 Feb 2023 05:14, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
112.91 USD 2 Feb 2023	137.00 USD 3 Feb 2023 05:12, UTC	0.82	1.07 USD Tril 2 Feb 2023	Wide	Stable	High	Exemplary	1 Feb 2023 06:00, UTC

currency headwind was 120 basis points worse than what was called for within guidance. For perspective, the comparison last year was 27% growth, so still challenging. In short, the top-line performance is showing improvement and was solid. From a retail perspective, online stores declined 3% year over year, physical stores improved 12%, third-party seller services grew 9%, and subscription services increased 10%. Increases on Prime membership fees and third-party seller fees helped revenue while Prime member churn was better than expected. Unit growth was 1%. The two most critical segments, AWS and advertising, grew 33% and 18% over the year-ago period, respectively. Compared with our model, third-party seller services and AWS drove the largest revenue outperformance.

Amazon's Profitability Hit by Inflation, Excess Capacity; Guidance Doesn't Help; FVE Down to $3,850 Dan Romanoff,Senior Equity Analyst,29 Apr 2022

We are lowering our fair value estimate to $3,850 per share, from $4,100, for wide-moat Amazon after it reported a mixed quarter and issued worse than expected guidance for the second quarter. The highlight of results was strength in AWS, which continues to benefit from the ongoing shift of enterprise workloads to the cloud. While revenue was ahead of the guidance midpoint, first-party sales suffered its second straight quarter of year-over-year contraction, which we believe is a first but is not a surprise. Operating margin was a concern, as inflation, excess labor, and excess capacity ate into profitability, which came in just above the low end of guidance and was well short of our expectations. Meanwhile, second-quarter guidance is well short of our model, as we think profitability challenges will linger for a couple of quarters and perhaps into next year; Prime Day will move into the third quarter, and demand levels have not yet normalized post-COVID-19. While we expect the second half of the year to show improvements, we modestly lowered our growth and profitability estimates, particularly in the near term, to account for guidance and heightened uncertainty.First-quarter revenue grew 7% (8% in constant currency) year over year to $116.4 billion, compared with guidance of $112 billion to $117 billion. Pandemic-fueled growth last year in online stores and third-party seller services continued to slow to a 3% decline and 7% growth year over year in the quarter, respectively, while physical stores continue to benefit from consumers leaving their homes to shop and grew by 17% year over year. Unit growth was flat, but we view this as a mix issue as shopping habits normalize. Amazon noted no consumer slowdown as macro factors such as inflation and the Russian invasion loom large. Compared with the year-ago period, subscription services slowed to 11% growth, AWS posted strong 37% growth, and advertising decelerated to 23% growth.

Amazon Delivers Mixed Quarter, Light Guidance, and Prime Price Hike; FVE Steady at $4,100 Dan Romanoff,Senior Equity Analyst,4 Feb 2022

We are maintaining our fair value estimate for wide-moat Amazon at $4,100 per share, and despite shares rising 14% after hours, we still view shares as undervalued. We think the highlight of the quarter was Amazon's plan to raise prices in the U.S. on Prime to $139 from $119, beginning on Feb. 18 for new members, underscoring Amazon's pricing power and highlighting Prime as a revenue driver. Meanwhile, Amazon will continue to invest heavily in Amazon Web Services, or AWS, fulfilment capacity and delivery, although we see these beginning to ease in the second half of 2022. Overall, we do not see issues with the long-term story as Amazon remains well positioned to prosper from the secular shift toward e-commerce and the public cloud over the next decade.Fourth-quarter revenue grew 9% (10% in constant currency) year over year to $137.4 billion, compared with guidance of $130 billion to $140 billion. Pandemic-fueled growth last year in online stores and third-party seller services continued to slow to a 1% decline and 11% growth year over year in the quarter, respectively, while physical stores enjoyed the benefit of easing lockdowns and grew by 17% year over year. The company continues to suffer from labor issues and increasing shipping costs, although the impact from these items came in as expected for the quarter. Still, operating profit came in better than we anticipated and above the high end of the guidance range.Compared with the year-ago period, subscription services slowed to 15% growth, AWS accelerated again to 40% growth, and advertising decelerated to 32% growth. Management broke out advertising revenue as a distinct segment for the first time—we were pleased to see that it was 93% of the "other" segment and was higher than our prior estimates. Performance of AWS remains impressive with a fourth straight quarter of acceleration off of a $13 billion revenue base a year ago. We continue to view advertising and AWS as key long-term drivers for shares.

Wage and Shipping Inflation Crimping Amazon’s Near-Term Margins; FVE Down to $4,100 Dan Romanoff,Senior Equity Analyst,29 Oct 2021

We are lowering our fair value estimate for wide-moat Amazon to $4,100 per share from $4,200, based mainly on margin pressures arising from hiring and shipping challenges, which we think may pressure profitability in the near term and, to a lesser extent, the long term. That said, we see shares as attractive. Amazon reported third-quarter results that came in above the midpoints of its guidance range for both revenue and operating income but were still shy of investor expectations. Guidance for the fourth quarter was modestly below our expectations but has little bearing on our long-term view. Meanwhile, the company continues to rapidly add capacity in order to meet customer demand and one day delivery, even as it roughly doubled its footprint during the past two years. We don’t see issues with the long-term story as Amazon remains well positioned to prosper from the secular shift toward e-commerce and the public cloud over the next decade, but we do see a modest reset in terms of growth and profitability through the next several quarters.Third-quarter revenue grew 15% (15% in constant currency) year over year to $110.8 billion, compared with FactSet consensus of $111.6 billion and guidance of $106 billion to $112 billion. Surging growth last year in online stores and third-party seller services slowed to 3% and 19% year over year gains in the third quarter, respectively, while physical stores accelerated to 13% growth. This shift succinctly captures the dynamics of the end of COVID-driven lockdowns. On a year over year basis, subscription services slowed to 24% growth, AWS accelerated to 39% growth, and other decelerated to 50% growth. Performance of AWS was staggering with acceleration from a $12 billion base a year ago. We continue to view advertising (in “other”) and AWS as key long-term growth drivers for the firm.

Morningstar Equity Company Report | Report as of 3 Feb 2023 05:20, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NASDAQ - ALL MARKETS Page 23 of 28

Amazon.com Inc AMZN ★★★★ 3 Feb 2023 05:14, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
112.91 USD 2 Feb 2023	137.00 USD 3 Feb 2023 05:12, UTC	0.82	1.07 USD Tril 2 Feb 2023	Wide	Stable	High	Exemplary	1 Feb 2023 06:00, UTC

Amazon E-Commerce Growth Slows as COVID-19 Eases; Other Segments Still Strong; FVE Steady at $4,200

Dan Romanoff,Senior Equity Analyst,30 Jul 2021

Wide-moat Amazon reported second-quarter results that were within its guidance range but were slightly short of investor expectations for both revenue and operating profit. Guidance for the third quarter is also light compared with FactSet consensus. In short, consumers' online shopping levels are returning to more normal levels as they shift some spending to other entertainment sources and offline shopping. Meanwhile, the company continues to add capacity at a breakneck pace in order to meet customer demand and one day delivery, even as it roughly doubled its footprint during the last 18 months. We see no cracks in the long-term story as Amazon remains well positioned to prosper from the secular shift toward e-commerce and the public cloud over the next decade. We note revenue weakness was limited to Amazon's own online store segment, with other segments performing well and overall profitability impressive despite lower revenue. Our model changes are fairly modest, thus we are maintaining our $4,200 per share fair value estimate and see shares as undervalued.Second-quarter revenue grew 27% (24% in constant currency) year over year to $113.1 billion, compared with FactSet consensus of $115.3 billion and guidance of $110 billion to $116 billion. Meteoric growth in online stores from the last four quarters slowed to a more pedestrian 16% year-over-year increase while physical stores recovered from a year of declining revenue and grew 11% year over year. Still, third party seller services grew 38% year over year despite a marked slowdown, as the solution remains attractive to merchants. Subscription services, AWS, and other remained strong, with year-over-year growth of 32%, 37%, and 88%, respectively. We continue to view advertising (in "other") and AWS as key long-term growth drivers for the firm. In particular we see AWS as the clear leader in public cloud and we think Amazon's advertising business offers a unique value proposition for marketers.

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, indepth competitive advantage analysis, and a variety of other analytical tools to augment this process. Moreover, we think analyzing valuation through discounted cash flows presents a better lens for viewing cyclical companies, high-growth firms, businesses with finite lives (e.g., mines), 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 shortterm market-price movements), but we believe these negatives are mitigated by deep analysis and our longterm 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: (1) our assessment of the firm's economic moat, (2) our estimate of the stock's fair value, (3) our uncertainty around that fair value estimate and (4) the current market price. This process ultimately culminates in our singlepoint star rating.

1. Economic Moat

The concept of an economic moat plays a vital role not only in our qualitative assessment of a firm's long-term investment potential, but also in the actual calculation of our fair value estimates. An economic moat is a structural feature that allows a firm to sustain excess profits over a long period of time. We define economic profits as returns on invested capital (or ROIC) over and above our estimate of a firm's cost of capital, or weighted average cost of capital (or WACC). Without a moat, profits are more susceptible to competition. We have identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.

Companies with a narrow moat are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. Wide-moat companies are those in which we have very high confidence that excess returns will remain for 10 years, with excess returns more likely than not to remain for at least 20 years. The longer a firm generates economic profits, the higher its intrinsic value. We believe low-quality, no-moat companies will see their normalized returns gravitate toward the firm's cost of capital more quickly than companies with moats.

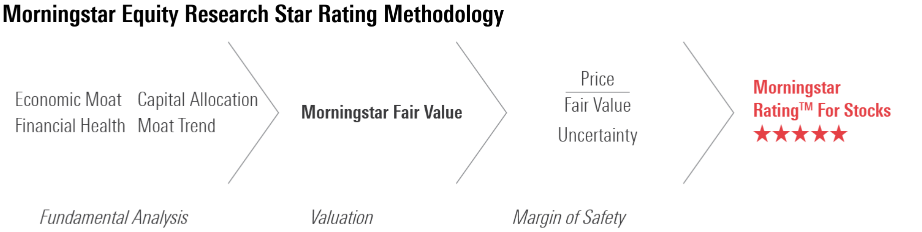
When considering a company's moat, we also assess whether there is a substantial threat of value destruction, stemming from risks related to ESG, industry disruption, financial health, or other idiosyncratic issues. In this context, a risk is considered potentially value destructive if its occurrence would eliminate a firm's economic profit on a cumulative or midcycle basis. If we deem the probability of occurrence sufficiently high, we would not characterize the company as possessing an economic moat.

To assess the sustainability of excess profits, analysts perform ongoing assessments of the moat trend. A firm's moat trend is positive in cases where we think its sources of competitive advantage are growing stronger; stable where we don't anticipate changes to competitive advantages over the next several years; or negative when we see signs of deterioration.

2. Estimated Fair Value

Combining our analysts' financial forecasts with the firm's economic moat helps us assess how long returns on invested capital are likely to exceed the firm's cost of capital. Returns of firms with a wide economic moat rating are assumed to fade to the perpetuity period over a longer period of time than the returns of narrow-moat firms, and both will fade slower than no-moat firms, increasing our estimate of their intrinsic value.

Morningstar Equity Research Star Rating Methodology



Our model is divided into three distinct stages:

Stage I: Explicit Forecast

In this stage, which can last five to 10 years, analysts make full financial statement forecasts, including items such as revenue, profit margins, tax rates, changes in workingcapital accounts, and capital spending. Based on these projections, we calculate earnings before interest, after taxes (EBI) and the net new investment (NNI) to derive our annual free cash flow forecast.

Stage II: Fade

The second stage of our model is the period it will take the company's return on new invested capital—the return on capital of the next dollar invested ("RONIC")—to decline (or rise) to its cost of capital. During the Stage II period, we use a formula to approximate cash flows in lieu of explicitly modeling the income statement, balance sheet, and cash flow statement as we do in Stage I. The length of the second stage depends on the strength of the company's economic moat. We forecast this period to last anywhere from one year (for companies with no economic moat) to 10–15 years or more (for wide-moat companies). During this period, cash flows are forecast using four assumptions: an average growth rate for EBI over the period, a normalized investment rate, average return on new invested capital (RONIC), and the number of years until perpetuity, when excess returns cease. The investment rate and return on new invested capital decline until a perpetuity value is calculated. In the case of firms that do not earn their cost of capital, we assume marginal ROICs rise to the firm's cost of capital (usually attributable to less reinvestment), and we may truncate the second stage.

Stage III: Perpetuity

Once a company's marginal ROIC hits its cost of capital, we calculate a continuing value, using a standard perpetuity formula. At perpetuity, we assume that any growth or decline or investment in the business neither creates nor destroys value and that any new investment provides a return in line with estimated WACC.

Because a dollar earned today is worth more than a dollar earned tomorrow, we discount our projections of cash flows in stages I, II, and III to arrive at a total present value of expected future cash flows. Because we are modeling free cash flow to the firm—representing cash available to provide a return to all capital providers—we discount future cash flows using the WACC, which is a weighted average of the costs of equity, debt, and preferred stock (and any other funding sources), using expected future proportionate long-term, market-value weights.

3. Uncertainty Around That Fair Value Estimate

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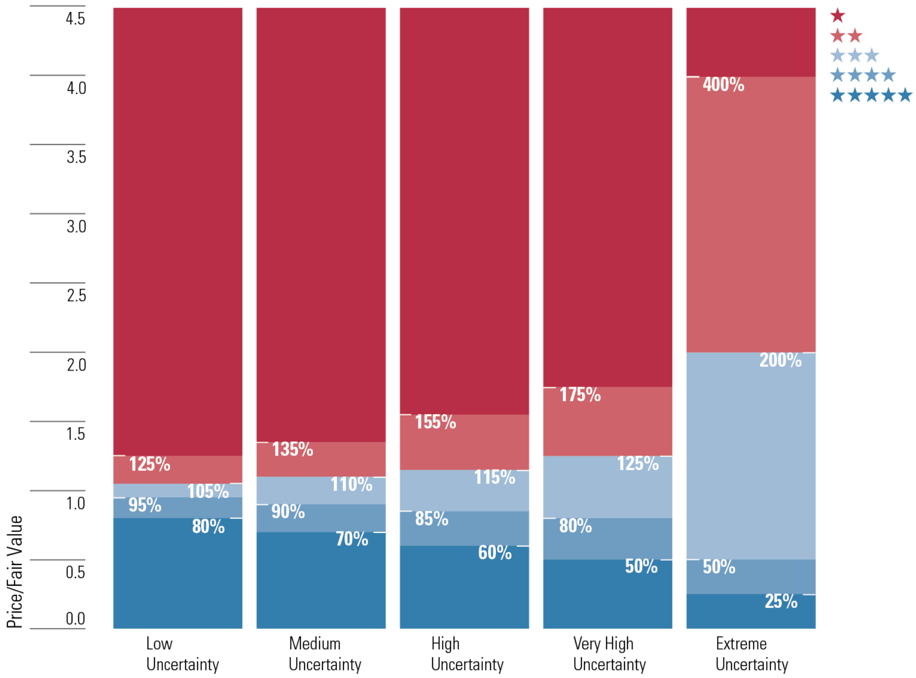
Morningstar Equity Research Star Rating Methodology



Morningstar's Uncertainty Rating is designed to capture the range of potential outcomes for a company's intrinsic value. This rating is used to assign the margin of safety required before investing, which in turn explicitly drives our stock star rating system. The Uncertainty Rating is aimed at identifying the confidence we should have in assigning a fair value estimate for a given stock.

Our Uncertainty Rating is meant to take into account anything that can increase the potential dispersion of future outcomes for the intrinsic value of a company, and anything that can affect our ability to accurately predict these outcomes. The rating begins with a suggested rating produced by a quantitative process based on the trailing 12-month standard deviation of daily stock returns. An analyst overlay is then applied, with analysts using the suggested rating, historical rating data, and their own knowledge of the company to inform them as they make the final Uncertainty Rating decision. Ultimately, the rating decision rests with the analyst. Analysts take into account many characteristics when making their final decision, including cyclical factors, operational and financial factors such as leverage, company-specific events, ESG risks, and anything else that might increase the potential dispersion of future outcomes and our ability to estimate those outcomes.

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. The more uncertain we are about the potential dispersion of outcomes, the greater the discount we require relative to our estimate of the value of the firm before we would recommend the purchase of the shares. In addition, the Uncertainty Rating provides guidance in portfolio construction based on risk tolerance.

Our Uncertainty Ratings are: Low, Medium, High, Very High, and Extreme.

	Margin of Safety	
Qualitative Analysis Uncertainty Ratings	★★★★★Rating	★Rating
Low	20% Discount	25% Premium
Medium	30% Discount	35% Premium
High	40% Discount	55% Premium
Very High	50% Discount	75% Premium
Extreme	75% Discount	300% Premium

Our uncertainty rating is based on the interquartile range, or the middle 50% of potential outcomes, covering the 25th percentile–75th percentile. This means that when a stock hits 5 stars, we expect there is a 75% chance that the intrinsic value of that stock lies above the current market price. Similarly, when a stock hits 1 star, we expect there is a 75% chance that the intrinsic value of that stock lies below the current market price.

4. Market Price

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

For more details about our methodology, please go to https://shareholders.morningstar.com

Morningstar Star Rating for Stocks

Once we determine the fair value estimate of a stock, we compare it with the stock's current market price on a daily basis, and the star rating is automatically re-calculated at the market close on every day the market on which the stock is listed is open. Our analysts keep close tabs on the companies they follow, and, based on thorough and ongoing analysis, raise or lower their fair value estimates as warranted.

Please note, there is no predefined distribution of stars. That is, the percentage of stocks that earn 5 stars can fluctuate daily, so the star ratings, in the aggregate, can serve as a gauge of the broader market's valuation. When there are many 5-star stocks, the stock market as a whole is more undervalued, in our opinion, than when very few companies garner our highest rating.

We expect that if our base-case assumptions are true the market price will converge on our fair value estimate over time generally within three years (although it is impossible to predict the exact time frame in which market prices may adjust).

Our star ratings are guideposts to a broad audience and individuals must consider their own specific investment goals, risk tolerance, tax situation, time horizon, income needs, and complete investment portfolio, among other factors.

The Morningstar Star Ratings for stocks are defined below:

★★★★★ We believe appreciation beyond a fair risk adjusted return is highly likely over a multiyear time frame. Scenario analysis developed by our analysts indicates that the current market price represents an excessively pessimistic outlook, limiting downside risk and maximizing upside potential.

★★★★ We believe appreciation beyond a fair risk-adjusted return is likely.

★★★ Indicates our belief that investors are likely to receive a fair risk-adjusted return (approximately cost of equity).

★★ We believe investors are likely to receive a less than fair risk-adjusted return.

★ Indicates a high probability of undesirable risk-adjusted returns from the current market price over a multiyear

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time frame, based on our analysis. Scenario analysis by our analysts indicates that the market is pricing in an excessively optimistic outlook, limiting upside potential and leaving the investor exposed to Capital loss.

Other Definitions

Last Price: Price of the stock as of the close of the market of the last trading day before date of the report.

Capital Allocation Rating: Our Capital Allocation (or Stewardship) Rating represents our assessment of the quality of management's capital allocation, with particular emphasis on the firm's balance sheet, investments, and shareholder distributions. Analysts consider companies' investment strategy and valuation, balance sheet management, and dividend and share buyback policies. Corporate governance factors are only considered if they are likely to materially impact shareholder value, though either the balance sheet, investment, or shareholder distributions. Analysts assign one of three ratings: "Exemplary", "Standard", or "Poor". Analysts judge Capital Allocation from an equity holder's perspective. Ratings are determined on a forward looking and absolute basis. The Standard rating is most common as most managers will exhibit neither exceptionally strong nor poor capital allocation.

Capital Allocation (or Stewardship) analysis published prior to Dec. 9, 2020, was determined using a different process. Beyond investment strategy, financial leverage, and dividend and share buyback policies, analysts also considered execution, compensation, related party transactions, and accounting practices in the rating.

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Sustainalytics ESG Risk Rating Assessment: The ESG Risk Rating Assessment is provided by Sustainalytics; a Morningstar company.

Sustainalytics' ESG Risk Ratings measure the degree to which company's economic value at risk is driven by environment, social and governance (ESG) factors.

Sustainalytics analyzes over 1,300 data points to assess a company's exposure to and management of ESG risks. In other words, ESG Risk Ratings measures a company's unmanaged ESG Risks represented as a quantitative score. Unmanaged Risk is measured on an open-ended scale starting at zero (no risk) with lower scores representing less unmanaged risk and, for 95% of cases, the unmanaged ESG Risk score is below 50.

Based on their quantitative scores, companies are grouped into one of five Risk Categories (negligible, low, medium, high, severe). These risk categories are absolute, meaning that a 'high risk' assessment reflects a comparable degree of unmanaged ESG risk across all subindustries covered.

The ESG Risk Rating Assessment is a visual representation of Sustainalytics ESG Risk Categories on a 1 to 5 scale. Companies with Negligible Risk = 5 Globes, Low Risk = 4, Medium Risk = 3 Globes, High Risk = 2 Globes, Severe Risk = 1 Globe. For more information, please visit sustainalytics.com/esg-ratings/

Ratings should not be used as the sole basis in evaluating a company or security. Ratings involve unknown risks and uncertainties which may cause our expectations not to occur or to differ significantly from what was expected and should not be considered an offer or solicitation to buy or sell a security.

Risk Warning

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