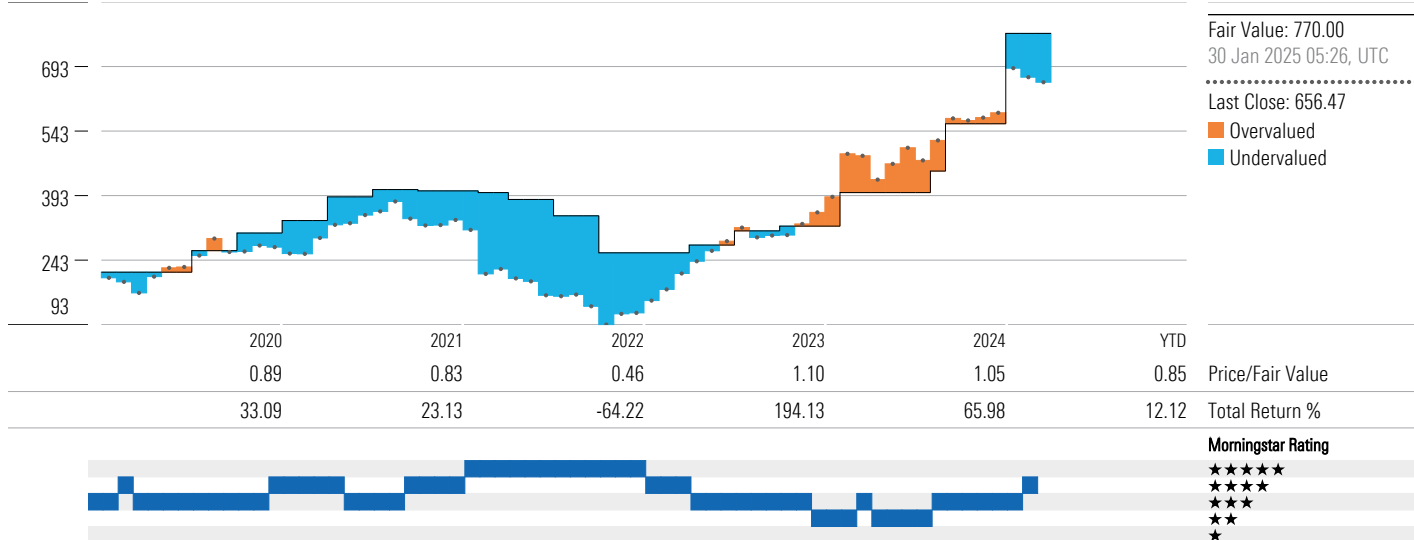


Meta Platforms Inc Class A META ★★★★★ 6 Mar 2025 22:50, UTC

Last Price 656.47 USD 5 Mar 2025	Fair Value Estimate 770.00 USD 30 Jan 2025 05:26, UTC	Price/FVE 0.85	Market Cap 1.59 USD Tril 6 Mar 2025	Economic Moat™ Wide	Equity Style Box Large Blend	Uncertainty High	Capital Allocation Standard	ESG Risk Rating Assessment¹ 5 Mar 2025 06:00, UTC
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Price vs. Fair Value



Total Return % as of 05 Mar 2025. Last Close as of 05 Mar 2025. Fair Value as of 30 Jan 2025 05:26, UTC.

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The primary analyst covering this company does not own its stock.

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

Meta Earnings: Record Profitability Makes for a Strong Finish in Fiscal 2024; FVE to \$770 From \$590

Analyst Note Malik Ahmed Khan, CFA, Equity Analyst, 30 Jan 2025

Meta reported strong fourth-quarter financial results, with the firm's sales growing 21% year over year to \$46.8 billion and operating margins expanding 700 basis points year over year to 48%.

Why it matters: Meta's advertising behemoth surpassed our expectations on both the top and bottom line. We were impressed by Meta's ad impression and price-per-ad growth, with both metrics expanding in the fourth quarter.

► We view Meta as carefully leveraging its investments in artificial intelligence to improve both its content recommendation and ad-monetization models, with the firm's strong ad sales supporting the argument that these investments are already bearing fruit.

► As a testament to the enduring appeal of its platform, Meta's global user count ticked up yet another 5% year over year to 3.35 billion. Alongside adding users, Meta's monetization improved as well, with the firm's average revenue per user growing an impressive 16% year over year.

The bottom line: We raise our fair value estimate for wide-moat Meta to \$770 from \$590, with shares now screening as marginally undervalued. The bulk of our fair value increase stems from a revised growth outlook for the firm and a more optimistic view of its generative AI investments.

► We are already seeing Meta's generative AI tools garner adoption on the advertising side, with more

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Sector

Communication Services

Industry

Internet Content & Information

Business Description

Meta is the largest social media company in the world, boasting close to 4 billion monthly active users worldwide. The firm's "Family of Apps," its core business, consists of Facebook, Instagram, Messenger, and WhatsApp. End users can leverage these applications for a variety of different purposes, from keeping in touch with friends to following celebrities and running digital businesses for free. Meta packages customer data, gleaned from its application ecosystem and sells ads to digital advertisers. While the firm has been investing heavily in its Reality Labs business, it remains a very small part of Meta's overall sales.

than 4 million advertisers using the firm's AI tools to create ad campaigns, up from 1 million six months ago.

► On the ad-targeting side, Meta disclosed increased ad quality by leveraging an AI-powered ad ranking system that was able to better personalize ads shown to users.

Key stats: While Meta's record operating margin of 48% for the fourth quarter is impressive on its own, the firm's operating profitability for its core Family of Apps segment was even better, with FoA operating margins coming in at 60%, up 600 basis points year over year.

Business Strategy & Outlook Malik Ahmed Khan, CFA, Equity Analyst, 22 Jan 2025

We view Meta as the clear leader in social media. The firm's application lineup, which includes Facebook, Instagram, WhatsApp, and Messenger, has close to 4 billion monthly active users, giving Meta unmatched scale in the sector.

The firm's strategy is dual-pronged. On the user side, Meta has leveraged its scale and social media savvy to iteratively improve its product lineup, adding attractive features such as Stories, Reels, and even new products such as Threads. Such improvements/additions not only improve user engagement, but also allow Meta to monetize these features/products by layering advertisements onto them.

On the advertising side, Meta allows advertisers of all shapes and sizes to place ads in front of engaged users. The company has benefited greatly from a general shift toward digital advertising within the broader advertising market, with social media advertising gaining substantial share, especially since the covid-19 pandemic. To bolster its advertising business, Meta has invested heavily to improve its ad-targeting algorithms, allowing it to improve its advertisers' return on ad spending and increasing its average revenue per user over time.

While the firm's core business remains advertising, Meta has shown a proclivity to expand beyond its ad-based revenue model by investing heavily in hardware, via Reality Labs, and AI, by investing in its own Llama large language model. While the firm's investments in Reality Labs have been demonstrably unprofitable, we are more optimistic about Meta's investments in AI. We believe Meta's AI investments, especially those aimed at improving the firm's ad-targeting algorithms, are value-accretive.

Beyond ad-targeting, Meta is also investing in consumer-facing AI, via its Llama chatbot, which is accessible to users across its applications. While a monetization strategy for this chatbot remains elusive in the near term, we believe the firm could drive increased user engagement/time spent by allowing its users access to a chatbot assistant within Meta's applications.

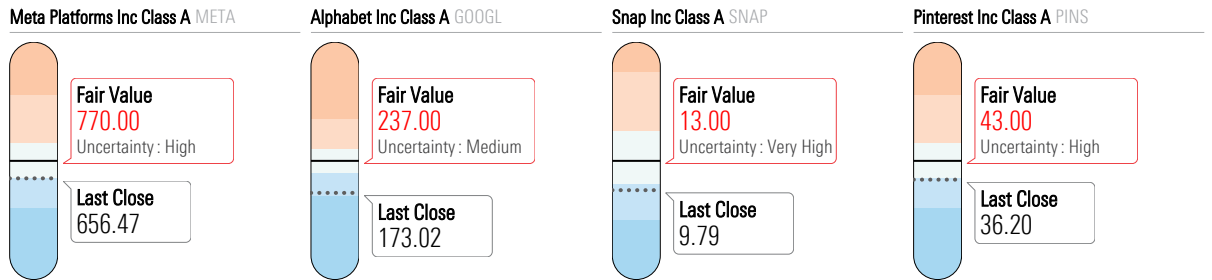
Bulls Say Malik Ahmed Khan, CFA, Equity Analyst, 30 Jan 2025

► Meta's core advertising business has benefited greatly through improved ad targeting and content

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Competitors



	Meta Platforms Inc Class A META	Alphabet Inc Class A GOOGL	Snap Inc Class A SNAP	Pinterest Inc Class A PINS
Economic Moat	Wide	Wide	None	Narrow
Currency	USD	USD	USD	USD
Fair Value	770.00 30 Jan 2025 05:26, UTC	237.00 5 Feb 2025 04:14, UTC	13.00 5 Feb 2025 05:11, UTC	43.00 9 Feb 2024 12:44, UTC
1-Star Price	1,193.50	319.95	22.75	66.65
5-Star Price	462.00	165.90	6.50	25.80
Assessment	Undervalued 6 Mar 2025	Undervalued 6 Mar 2025	Undervalued 6 Mar 2025	Undervalued 6 Mar 2025
Morningstar Rating	★★★★★ 6 Mar 2025 22:50, UTC	★★★★★ 6 Mar 2025 22:41, UTC	★★★★★ 6 Mar 2025 22:54, UTC	★★★★★ 6 Mar 2025 22:52, UTC
Analyst	Malik Ahmed Khan, Equity Analyst	Malik Ahmed Khan, Equity Analyst	Malik Ahmed Khan, Equity Analyst	Malik Ahmed Khan, Equity Analyst
Capital Allocation	Standard	Exemplary	Standard	Standard
Price/Fair Value	0.85	0.73	0.74	0.80
Price/Sales	10.43	6.15	3.03	6.93
Price/Book	9.11	6.50	6.75	5.15
Price/Earning	27.25	21.93	—	13.56
Dividend Yield	0.30%	0.35%	0.00%	0.00%
Market Cap	1,590.96 Bil	2,100.95 Bil	16.29 Bil	23.41 Bil
52-Week Range	414.50 — 740.91	130.85 — 207.05	8.29 — 17.33	27.00 — 45.19
Investment Style	Large Blend	Large Value	Mid Blend	Mid Blend

recommendation algorithms as well as a secular increase in digital advertising spending.

- ▶ Meta's scale, with the majority of the world's internet-connected users accessing its applications, allows it access to high-quality user data which it can package and sell to advertisers.
- ▶ The firm has an opportunity to drive more ad inventory growth, leveraging new products such as Threads while also improving its monetization of ads on more nascent features such as Stories and Reels.

Bears Say Malik Ahmed Khan, CFA, Equity Analyst, 30 Jan 2025

- ▶ Meta's investments in Reality Labs and generative AI stand to lose the firm billions of dollars annually, taking some of the shine off its overall business.
- ▶ The firm has a monopoly case against it in the US which could potentially force it to break up, severing some of the scale advantages it has built up over time.
- ▶ Meta has disproportionately benefited from increased ad spending by Chinese retailers including Temu

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and Shein. A slowdown in spending by these firms could hit Meta's growth.

Economic Moat Malik Ahmed Khan, CFA, Equity Analyst, 22 Jan 2025

We believe Meta merits a wide economic moat rating due to the firm's intangible assets and the potent network effect around its Family of Apps business. While the firm's Reality Labs segment continues to hemorrhage cash, we believe Meta's FoA business' strong competitive advantages will likely allow the firm to generate returns in excess of its cost of capital over the next two decades.

Family of Apps

We assign a wide moat rating to Meta's Family of Apps, or FoA, business segment. We believe that the firm has built significant intangible assets, primarily via the customer data it collects and a potent network effect that has enabled Meta to be the most dominant social media platform in the world.

Meta's FoA segment includes revenue from its social media applications including Facebook, Instagram, WhatsApp, and Messenger. The firm's dominance in social media is evidenced by its four primary applications constituting four of the six most popular social media applications globally. Also, Meta's scale in the social media business is staggering. Almost 4 billion people use at least one of its applications every month. For context, according to various estimates, a little more than 5 billion people in the world have access to the internet, implying that around 75% of people connected to the internet globally are users of Meta's applications.

The vast majority of Meta's massive user base across its application ecosystem uses its applications free of charge. Instead of paying Meta a subscription fee to use its applications, they provide Meta with an audience that it can sell advertisements to. Meta can accumulate data on users, such as demographic information, likes/dislikes, and topics of interest to feed into its advertising engine, which lets advertisers target ads placed on Meta's properties.

We view Meta's collection, storage, and subsequent monetization of this rich, high-quality data as an intangible asset that provides the firm with a meaningful competitive advantage over other social media platforms and advertising venues. This data, and the ad technology and algorithms built on top of it, provide Meta a peerless position when it comes to monetizing its large user base. Further, as Meta's data collection and ad-targeting algorithms have gotten better, the firm has also flexed its pricing power. A prime example of this pricing power, and the increasingly strong value proposition the firm offers advertisers, is the rapid growth in Meta's average ad revenue per user, which has increased to more than \$40 globally at the end of 2023 from around \$25 in 2018.

Further, Meta's ad-targeting and content recommendation algorithms improve as more users give it their data by using its applications. This dynamic creates a potent network effect with the value of its application ecosystem increasing as more people use it. These network effects serve to create barriers

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to success for new social network upstarts, who would start off subscale, as well as barriers to exit for existing users who might leave behind friends, contacts, pictures, memories, and more by completely departing to alternative applications such as Snapchat or TikTok.

Meta has leveraged its scale and large installed base to create new avenues of user engagement that directly compete with applications that stand to threaten its social media dominance. When threatened by Snapchat, Meta launched Stories, a Snapchat copycat, that allows FoA users to post short picture or video collections that disappear after 24 hours. Similarly, when threatened by TikTok and its engaging short-form video content, Meta rolled out Reels, a short-form video offering nearly identical to TikTok.

While Stories and Reels can be seen as defensive maneuvers aimed to keep users on Meta's applications, Meta has demonstrated its ability to use this copycat model as an offensive, land-grab strategy as well. When Twitter/X was undergoing substantial turmoil following Elon Musk's takeover of the platform, Meta launched Threads, a Twitter/X copycat. In all three cases, Stories, Reels, and Threads, Meta has been able to create strong, monetizable products that have hundreds of millions of users across them. We believe Meta's ability to weaponize its scale as a competitive advantage makes the economic moat around its business more durable.

Meta's scale is also important when contextualizing the firm's ongoing investments in AI. Meta's capital expenditure, mostly on data centers equipped with expensive graphics processing units, has led investors to question whether the firm's investments in AI will yield meaningful results and generate returns in excess of the firm's cost of capital. When discerning the impact of these AI investments on Meta's return on invested capital profile and its durable competitive advantage and differentiation, we see positives and negatives.

On the positive side, the firm could leverage AI to improve its ad tech business, improving advertiser ROI and encouraging more ad dollars to be spent on its platform. Investments in AI that serve this end are, in our view, explicitly value-accretive. By investing within its moat, Meta could leverage its AI infrastructure to further pull away from competition by driving a higher ad revenue per user in its highly profitable ad business. However, investments to drive better ad targeting are nothing new. Also, the firm's AI investments could be leveraged to drive more engaging content for its end users on Facebook and Instagram. Again, such investments in better user engagement are ultimately value-accretive as they increase Meta's value to advertisers who can place ads for more engaged users.

On the other hand, the firm's investments in generative AI and its push to have Llama as the chatbot of choice for its users don't inspire the same confidence in us. First, the firm lacks any meaningful monetization strategy around its chatbot. We understand that if users have a competent chatbot within their Meta application of choice they don't need to leave Meta's properties, boosting time spent on Meta's application ecosystem. However, at the same time we'd imagine it'd be significantly cheaper for

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Meta to have a licensing agreement with a company like OpenAI/Anthropic/Perplexity, which could provide Meta with chatbots that would have the same end user-engagement result.

Also, we see the investments that public cloud vendors are making in AI as beneficial for public cloud infrastructure providers like Amazon, Microsoft, and Alphabet. Meta, on the other hand, does not have a presence in the public cloud market and isn't planning to become a public cloud vendor either. As a result, it strikes us as odd that the company would invest billions of dollars in developing a technology that doesn't have an obvious monetization strategy behind it. In sum, while we like Meta's investments in AI as they relate to the firm's core advertising business, we remain skeptical of the long-term value added by the firm's investments in user-facing chatbots.

Reality Labs

We believe Meta's Reality Labs business merits a no moat rating. While the firm's investments in metaverse and virtual/augmented reality could lead to profitable growth in the future, the segment continues to burn capital for Meta, with the segment's operating losses exceeding \$16 billion in 2023. Due to its insignificant size, as a proportion of Meta's overall business, it does not preclude us from viewing the overall firm as having a wide moat.

Fair Value and Profit Drivers Malik Ahmed Khan, CFA, Equity Analyst, 30 Jan 2025

Our fair value estimate for Meta is \$770 per share, implying a 2025 adjusted price/earnings multiple of 30 times and an enterprise value/adjusted EBITDA multiple of 16 times.

We forecast Meta's sales growing at a 12% compound annual growth rate for the next five years, spearheaded primarily by an increase in average revenue per user, with user growth also chipping in.

Drilling deeper, we believe Meta has a strong monetization opportunity ahead of it in Asia and the rest of the world. While we expect advertising sales from North America and Europe to grow steadily, we believe increasingly affluent and growing middle classes in Asia, Africa, and the Middle East will allow Meta to improve its ad monetization in those regions, lifting its overall top line.

While we expect Reality Labs sales to grow at a double-digit rate over the next five years, we believe Meta's advertising juggernaut will remain the primary driver of its business and intrinsic value over our explicit forecast.

On the profitability side, we remain impressed by Meta's ability to drive efficiency across its operational footprint, with the firm's 2024 operating margins of 42%, up from the 2022 nadir of 25%. Looking ahead, we believe that the firm's profitability will slightly improve, with operating margins rising to 43% over our explicit five-year forecast as increased efficiency and strong topline growth more than offset expanding investments in areas such as Generative AI and Reality Labs.

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Risk and Uncertainty Malik Ahmed Khan, CFA, Equity Analyst, 22 Jan 2025

We assign Meta a Morningstar Uncertainty Rating of High. We believe Meta's investments in unprofitable ventures such as generative AI and Reality Labs add a layer of uncertainty around its business, even as its large and stable advertising business continues to generate substantial cash flows in our forecast.

As we look ahead, we believe Meta's considerable scale and intangible assets, such as its ad-targeting algorithms, will most likely enable the firm to maintain its dominance in the social media application space. While there are antitrust concerns around Meta's business, with US antitrust regulators pursuing a monopoly case against the firm, we view an often-hypothesized breakup of Meta's applications into separate businesses as unlikely. At the same time, there is headline risk that the firm faces as the case moves through the courts with a trial likely starting in 2025.

Beyond advertising, Meta's investments in Reality Labs and generative AI, primarily via its Llama LLM, add uncertainty to the firm's overall business. Along with losing Meta billions of dollars every year, a profitable monetization strategy for both investments remains elusive. While the firm has shown a panache of proving investors and analysts wrong with large business decisions in the past, we remain uncertain about the long-term value accretion these investments stand to provide Meta.

The firm's high dependence on user behavior data represents an environmental, social, and governance risk. If it fails to maintain adequate data privacy and security, Meta's advertising business will likely suffer. Also, the broader impact of social media on its users' mental health, especially that of teenagers, is also a pertinent ESG risk for Meta. There appears to be bipartisan support in the US for increased regulation of social media platforms that could include forcing Meta to change its content recommendation algorithms, potentially hitting the firm's advertising business.

Capital Allocation Malik Ahmed Khan, CFA, Equity Analyst, 30 Jan 2025

We assign Meta a Standard Morningstar Capital Allocation Rating based on its sound balance sheet, fair investments, and appropriate shareholder distributions.

Meta's balance sheet remains enviable, especially given that digital advertising has not been very cyclical thus far. Meta's leverage ratios remain exceptionally strong, with \$49 billion in net cash and cash equivalents as of the end of 2024.

Meta's research and development investments over the past decade have largely been value-accretive as the firm has been able to drive user growth while also improving monetization across its applications. While some recent R&D investments, particularly in Reality Labs, have been more questionable, we find the firm's internal investment strategy solid. With its large amount of cash, Meta is well positioned to make additional investments primarily by building out new features and products that drive increased

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user engagement.

Coupled with investments within the business, previous acquisitions have strengthened the firm’s network effect moat source and accelerated top-line growth, most notably including Instagram and WhatsApp. The management team—more specifically, founder and CEO Mark Zuckerberg—has demonstrated its focus on long-term returns on investments, which we view as positive.

However, at the same time we believe that combative antitrust regulators scrutinizing Meta’s every move and an ongoing monopoly case against the firm make it unlikely that Meta will be able to engage in any blockbuster mergers and acquisitions in the near future.

We also applaud management’s walled-garden strategy as it continues to protect the firm’s most valuable asset, its user base and usage data. However, the US and other governments around the world may also impose restrictions on Meta’s use of user data. Management has responded well as it continues to increase its influence in Washington, D.C.

In terms of shareholder distributions, Meta declared a dividend for the first time in the first quarter of 2024. The firm has repurchased shares consistently, spending \$28 billion, \$19.8 billion, and \$30 billion in 2022, 2023, and 2024, respectively.

Our main knock on Meta’s management is its use of a multiple share class structure that may limit the voice of minority shareholders. This has become more of an issue given how Meta is addressing data privacy and security, which has led to some shareholders wanting to reduce Zuckerberg’s control of the company. Some continue to believe that Zuckerberg’s control of Meta creates a conflict of interest, allowing him to pursue passion projects whether or not they have the potential to generate exceptional returns for shareholders.

Analyst Notes Archive

AI DeepSeek Coverage Summary: Maintaining Our Fair Values; Pullback Was Healthy Eric Compton, CFA, Director, 28 Jan 2025

We have consolidated our recent DeepSeek-related coverage in this note. Artificial intelligence affects companies across much of our coverage, including semiconductors, cloud infrastructure, software, utilities, and energy. Many of the firms under our coverage with an “AI premium” were already trading in 1- to 2-star territory. Our valuations were already positioned for a pullback of this nature, as we were having a hard time justifying the increases in revenue implied by these valuations. We view the current pullback as healthy, even as we remain positive on the long-term potential of AI. We have maintained our fair value estimates across the affected companies. Our thesis, after the release of DeepSeek, is that we were going to see instances of sleeker, more-efficient AI models that would not rely on massive clusters of AI GPUs and related hardware. This was the only way the ecosystem was going to successfully address large numbers of use cases in the long term. We believe that lower costs—making

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AI cheaper, therefore more economical—increase the number of use cases it is viable for, and as a result, should increase demand. This is the same path the PC revolution followed, with computing power becoming cheap enough that millions of individuals could use it at an affordable cost. The same happened with the cloud and SaaS revolution thereafter, where the incremental cost of adding users was close to zero. We believe a future where AI was both prohibitively expensive and also “taking over the world” was not likely. As such, we view the advancements made by DeepSeek as promising and healthy for the overall ecosystem. For more in-depth coverage on specific industries, please refer to our notes on Nvidia, the hyperscalers, semiconductor equipment companies, TSMC, Apple and networking, utilities, European utilities, HVAC, and industrials.

Meta: Uncertainty Around TikTok's Future in the US Should Benefit Meta's Ad Sales Malik Ahmed Khan, CFA, Equity Analyst, 22 Jan 2025

Over the past week, there has been a lot of uncertainty around TikTok's future in the US, with a Supreme Court decision that upheld a TikTok ban followed by President Trump's executive order granting TikTok a 75-day extension to either sell 50% of its platform to US investors or face a ban. Why it matters: TikTok is an incredibly popular social media platform, with more than 170 million users in the US. While lower than Meta's 70%, TikTok has a respectable 15% market share of US social media ad spending, larger than peers such as Snap, Reddit, and Pinterest. We believe Meta's Reels and YouTube's Shorts are the most obvious beneficiaries of any user or advertiser shift away from TikTok. We saw both products gain material user engagement following the TikTok ban in India in 2020 and foresee a similar trend if TikTok is banned in the US. Short-form video is a fast-growing and popular medium, with its proliferation particularly strong in younger demographics. Advertisers targeting this medium may be put off by the uncertainty around TikTok's future and divert their dollars to other short-form video products like Reels and Shorts. The bottom line: We are raising our fair value estimate for wide-moat Meta to \$590 from \$560 as we incorporate slightly stronger US advertising revenue for upcoming 2025 primarily due to advertisers looking to spread some of their TikTok ad budgets elsewhere. Our base case incorporates TikTok remaining operational in the US, likely through a 50% sale to a US-based company. If ByteDance, TikTok's parent company, does not come to an agreement with the US regarding TikTok's future in the next 75 days, resulting in a TikTok ban, we'd expect a more material flow of ad dollars and users toward Meta, resulting in an additional 20% fair value increase. Coming up: Meta reports fourth-quarter earnings on Jan. 29. We expect management to provide commentary on changes in ad demand stemming from uncertainty around TikTok's future in the US.

Meta: Rollback of Content Moderation Features Should Not Affect Financials Malik Ahmed Khan, CFA, Equity Analyst, 8 Jan 2025

Meta Platforms announced an overhaul of its content moderation policies earlier this week. Chief among the changes is a move away from third-party fact-checking of user-posted content toward a

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Meta Platforms Inc Class A META ★★★★★ 6 Mar 2025 22:50, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
656.47 USD 5 Mar 2025	770.00 USD 30 Jan 2025 05:26, UTC	0.85	1.59 USD Tril 6 Mar 2025	Wide	Large Blend	High	Standard	5 Mar 2025 06:00, UTC

user-led community notes approach to content moderation. Why it matters: Facebook, Instagram, and Threads — Meta's applications that would be affected by this change in content moderation — have billions of users worldwide. As a result, a change in content moderation policies stands to have a material impact on the content available. As the fact-checking system stands right now, Meta, as a social media platform, acts as an arbiter of truth, which, according to management, has led to censorship of divergent political and social views. With billions of posts on its platforms on a weekly basis, any zealous content moderation can have an impact on millions of users. With this new user-led content moderation policy, Meta is aiming to lessen the censorship the company claims it has seen recently. The bottom line: We are maintaining our \$560 fair value estimate for wide-moat Meta. We doubt that this new content moderation approach will have a material impact on advertising revenue or user engagement/addition metrics. Because the vast majority of Meta's advertising revenue comes from small businesses, the firm is less leveraged to large advertisers that may want more strict content moderation as they aim to protect their brand image. On the other hand, there is an argument that Meta's new policy could be margin-accretive, as it would reduce the ongoing costs of third-party and in-house fact-checking teams. Viewed in the context of Meta's overall business, however, we don't view these costs as having a significant effect.

Meta Earnings: Powerful Advertising Engine Continues to Chug Along Malik Ahmed Khan, CFA, Equity Analyst, 31 Oct 2024

Meta reported strong third-quarter financial results, with revenue growing 19% year over year to \$41 billion. Profitability also improved, with operating margins expanding 300 basis points from a year ago to 43%. Capital expenditures remain elevated due to heavy artificial intelligence investment. Why it matters: Meta's advertising juggernaut produced another solid quarter, with ad impressions and average price per ad both up year over year. Management called out its investments in generative AI, or GenAI, as also value-accretive by improving user engagement and monetization. Ad impressions and average price per ad increased 7% and 11% year over year, respectively. The firm saw broad-based strength, with ad impressions and prices growing across geographies. More than 500 million people are using Meta's chat assistant within its applications. We were encouraged to see management call out improvements in user engagement stemming from increased usage of the chat assistant. The bottom line: We maintain our \$560 fair value estimate for wide-moat Meta, and we continue to view the firm as well positioned to leverage AI to improve user engagement and user monetization. With Meta's shares trading slightly down after hours, we view them as fairly valued. While Meta's investments in GenAI have raised eyebrows, we reiterate our belief that their true value will manifest itself in Meta's core advertising product. We believe ad campaigns on Meta can derive greater value using GenAI tools, which Meta can capture via its potent monetization engine. At the same time, we expect near-term margins to remain pressured as Meta's capital expenditures flow through its income statement as depreciation charges and it continues to spend heavily on AI talent.

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Meta: Firm's Scale and Prowess in Digital Advertising Is Hard to Match Malik Ahmed Khan, CFA, Equity Analyst, 19 Sep 2024

We are raising our fair value estimate for wide-moat Meta to \$560 from \$450 after taking a fresh look at the firm's overall business and incorporating a more optimistic outlook on the firm's investments in artificial intelligence, especially as they relate to Meta's ability to improve its ad-targeting business. While the firm's investments in AI could potentially improve its core business, we remain pessimistic on the long-term value created by Meta's investments in its Reality Labs division and are reducing our Morningstar Capital Allocation Rating to Standard from Exemplary. We view Meta as the clear leader in social media. The firm's application lineup, which includes Facebook, Instagram, WhatsApp, and Messenger, has close to 4 billion monthly active users, giving Meta unmatched scale in the space. The firm's strategy is two-pronged. On the user side, Meta has leveraged its scale and social media savvy to improve its product lineup, adding features such as Stories, Reels, and even new products such as Threads. Such enhancements and additions not only improve user engagement, but also allow Meta to grow revenue by layering ads onto them. On the ad side, Meta allows advertisers of all shapes and sizes to place ads in front of engaged users. The company has benefited greatly from a general shift toward digital advertising within the broader advertising market, with social media advertising gaining substantial share, especially since the covid-19 pandemic. To bolster its ad business, Meta has invested heavily in improving its ad-targeting algorithms, allowing it to improve advertisers' returns on ad spending and increasing its average revenue per user over time. We forecast Meta's sales growing at a 12% compound annual growth rate for the next five years, spearheaded primarily by an increase in average revenue per user with user growth also chipping in. We believe Meta has a strong opportunity ahead in Asia and the rest of the world.

Meta Earnings: Strong Advertising Demand Drives Impressive Cash Flow Despite Ramping Investments Michael Hodel, CFA, Director, 1 Aug 2024

Meta continues to deliver solid results amid strong digital advertising demand while investing aggressively in AI-related infrastructure, technology, and products. The firm tightened its capital spending forecast to the upper end of its previous expectations and said that investment growth will be "significant" in 2025. Meta reiterated that it believes the computing capacity it is building can be used for various tasks, with the flexibility to shift wherever the best opportunities emerge, a similar view that Alphabet has shared. We aren't convinced Meta will earn strong returns on its infrastructure investment, but we expect the firm will continue to generate strong cash flow regardless of the direction AI takes. We were also pleased the firm maintained its expense forecast for the year. We are increasing our fair value estimate to \$450 from \$400. Revenue increased 22% to \$39.1 billion during the second quarter, beating the high end of management's forecast. User growth slowed a bit, with daily family-of-apps users expanding less than 1% sequentially for the first time in two years, reaching 3.27

Meta Platforms Inc Class A META ★★★★★ 6 Mar 2025 22:50, UTC

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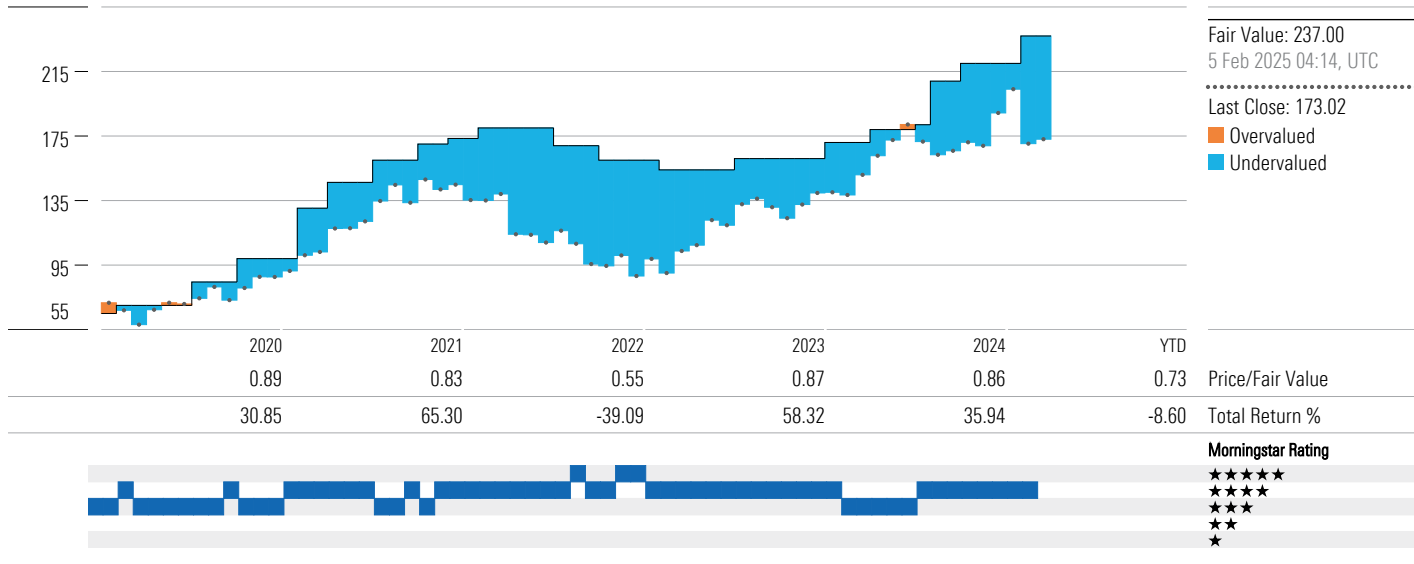
billion. Ad impression growth slowed sharply to 10% year over year from 20% last quarter, but this deceleration primarily reflects a surge in impressions last year—volume growth on a two-year and three-year basis has held fairly steady over the past several quarters. Ad pricing was impressive, increasing 10% year over year. Meta indicated that ad demand was broad-based across geographies and industries, but again pointed to strong demand among retailers, especially those based in Asia, as the biggest growth driver. The operating margin held steady with the prior quarter at 38%, up from 29% a year ago, thanks to lower restructuring costs and operating leverage against R&D, marketing, and overhead costs. While capital investment increased to \$8.2 billion from \$6.1 billion a year ago, free cash flow increased nearly 20% to \$13.2 billion during the quarter. ■■

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Meta Platforms Inc Class A META ★★★★★ 6 Mar 2025 22:50, UTC

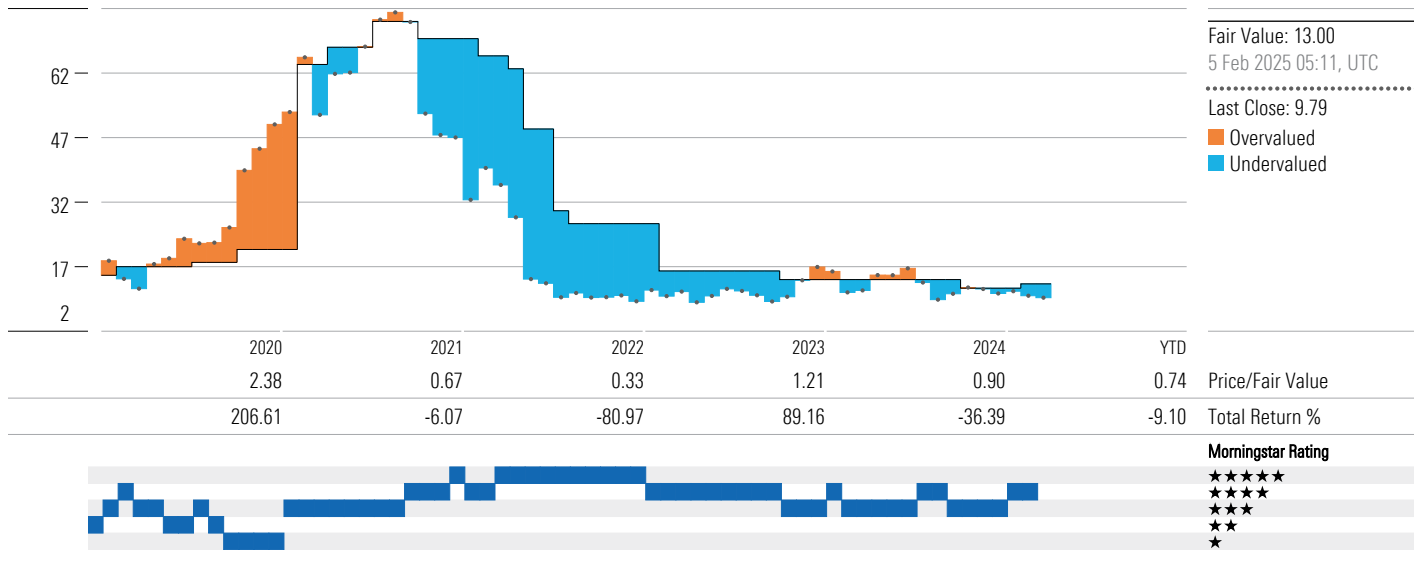
Competitors Price vs. Fair Value

Alphabet Inc Class A GOOGL



Total Return % as of 05 Mar 2025. Last Close as of 05 Mar 2025. Fair Value as of 5 Feb 2025 04:14, UTC.

Snap Inc Class A SNAP

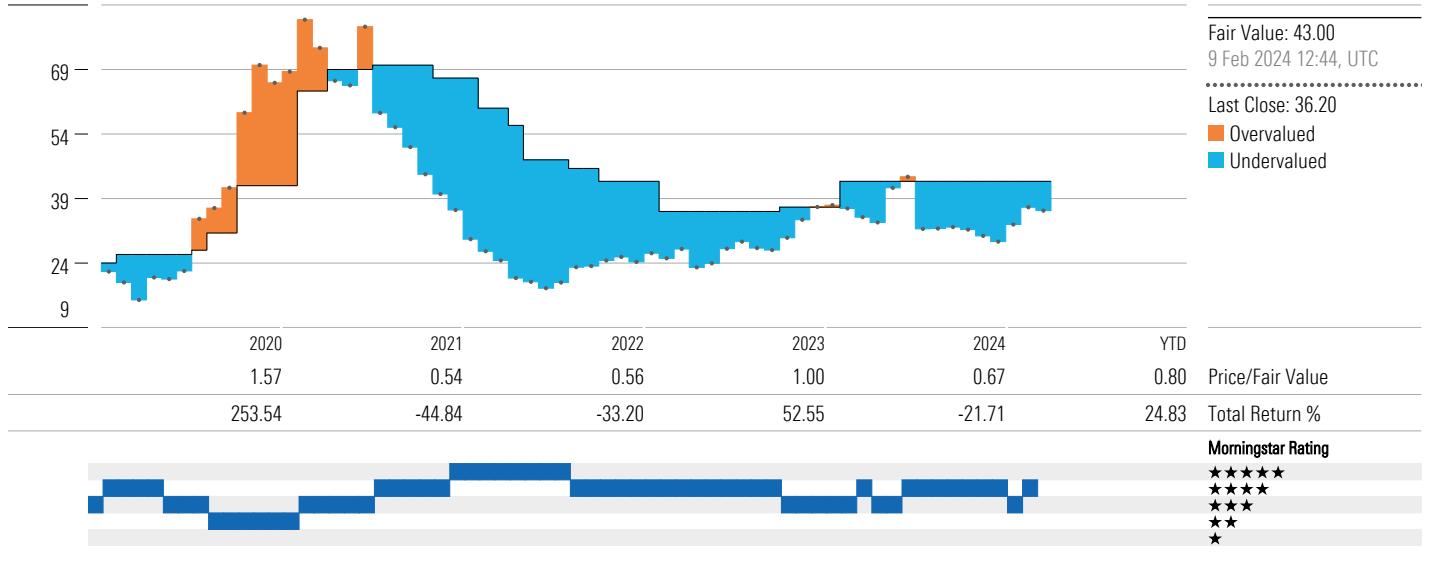


Total Return % as of 05 Mar 2025. Last Close as of 05 Mar 2025. Fair Value as of 5 Feb 2025 05:11, UTC.

Meta Platforms Inc Class A META ★★★★★ 6 Mar 2025 22:50, UTC

Competitors Price vs. Fair Value

Pinterest Inc Class A PINS



Total Return % as of 05 Mar 2025. Last Close as of 05 Mar 2025. Fair Value as of 9 Feb 2024 12:44, UTC.

Meta Platforms Inc Class A META ★★★★★ 6 Mar 2025 22:50, UTC

Last Price 656.47 USD 5 Mar 2025	Fair Value Estimate 770.00 USD 30 Jan 2025 05:26, UTC	Price/FVE 0.85	Market Cap 1.59 USD Tril 6 Mar 2025	Economic Moat™ Wide	Equity Style Box Large Blend	Uncertainty High	Capital Allocation Standard	ESG Risk Rating Assessment¹ 5 Mar 2025 06:00, UTC
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Morningstar Historical Summary

Financials as of 31 Dec 2024

Fiscal Year, ends 31 Dec	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	YTD	TTM
Revenue (USD Bil)	18	28	41	56	71	86	118	117	135	165	165	165
Revenue Growth %	43.8	54.2	47.1	37.4	26.6	21.6	37.2	-1.1	15.7	21.9	21.9	21.9
EBITDA (USD Bil)	8.16	14.87	23.63	29.23	34.73	39.53	55.27	37.69	59.05	86.88	86.88	86.88
EBITDA Margin %	45.5	53.8	58.1	52.3	49.1	46.0	46.9	32.3	43.8	52.8	52.8	52.8
Operating Income (USD Bil)	6.23	12.43	20.20	24.91	28.99	32.67	46.75	28.94	46.75	69.38	69.38	69.38
Operating Margin %	34.7	45.0	49.7	44.6	41.0	38.0	39.7	24.8	34.7	42.2	42.2	42.2
Net Income (USD Bil)	3.69	10.22	15.93	22.11	18.49	29.15	39.37	23.20	39.10	62.36	62.36	62.36
Net Margin %	20.5	36.9	39.2	39.6	26.2	33.9	33.4	19.9	29.0	37.9	37.9	37.9
Diluted Shares Outstanding (Mil)	2,853	2,925	2,956	2,921	2,876	2,888	2,859	2,702	2,629	2,614	2,614	2,614
Diluted Earnings Per Share (USD)	1.29	3.49	5.39	7.57	6.43	10.09	13.77	8.59	14.87	23.86	23.86	23.86
Dividends Per Share (USD)	—	—	—	—	—	—	—	—	—	2.00	2.00	2.00

Valuation as of 28 Feb 2025

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Recent Qtr	TTM
Price/Sales	18.6	13.5	14.3	7.4	8.9	10.0	8.6	2.8	7.3	9.8	9.8	10.6
Price/Earnings	105.3	44.4	34.2	19.7	32.9	31.2	24.0	11.5	31.3	27.6	27.6	28.0
Price/Cash Flow	40.3	26.5	24.3	13.1	16.9	23.3	18.1	6.1	14.1	18.6	18.6	19.1
Dividend Yield %	—	—	—	—	—	—	—	—	—	0.34	0.34	0.3
Price/Book	7.2	6.2	7.2	4.7	6.2	6.6	6.9	2.5	6.3	9.0	9.0	9.3
EV/EBITDA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Operating Performance / Profitability as of 31 Dec 2024

Fiscal Year, ends 31 Dec	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	YTD	TTM
ROA %	8.2	17.8	21.3	24.3	16.0	19.9	24.2	13.2	18.8	24.7	24.7	24.7
ROE %	9.1	19.7	23.8	27.9	20.0	25.4	31.1	18.5	28.0	37.1	37.1	37.1
ROIC %	9.0	19.4	23.4	27.0	18.2	22.8	28.1	15.8	22.2	28.8	28.8	28.8
Asset Turnover	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.6	0.7	0.7	0.7

Financial Leverage

Fiscal Year, ends 31 Dec	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Recent Qtr	TTM
Debt/Capital %	0.2	—	—	—	8.6	7.0	9.3	16.7	18.9	20.5	20.5	—
Equity/Assets %	89.5	91.1	88.0	86.4	75.8	80.5	75.2	67.7	66.7	66.2	66.2	—
Total Debt/EBITDA	0.0	—	—	0.0	0.3	0.3	0.3	0.7	0.6	0.6	0.6	—
EBITDA/Interest Expense	354.9	1,486.9	3,937.5	—	—	—	2,403.5	203.7	132.4	121.5	121.5	121.5

Morningstar Analyst Historical/Forecast Summary as of 29 Jan 2025

Financials	Estimates					Forward Valuation	Estimates					
	2023	2024	2025	2026	2027		2023	2024	2025	2026	2027	
Fiscal Year, ends 31 Dec 2024												
Revenue (USD Mil)	134,902	164,500	188,024	211,734	236,390	Price/Sales	6.7	9.0	8.5	7.5	6.7	
Revenue Growth %	15.7	21.9	14.3	12.6	11.6	Price/Earnings	23.8	24.5	24.5	21.2	18.7	
EBITDA (USD Mil)	71,956	101,568	123,474	146,956	164,660	Price/Cash Flow	—	—	—	—	—	
EBITDA Margin %	53.3	61.7	65.7	69.4	69.7	Dividend Yield %	—	0.3	0.4	0.4	0.5	
Operating Income (USD Mil)	46,751	69,380	74,587	86,612	98,471	Price/Book	6.1	8.4	6.7	5.2	4.1	
Operating Margin %	34.7	42.2	39.7	40.9	41.7	EV/EBITDA	12.3	14.4	12.7	10.6	9.5	
Net Income (USD Mil)	39,098	62,360	66,552	76,958	87,218							
Net Margin %	29.0	37.9	35.4	36.4	36.9							
Diluted Shares Outstanding (Mil)	2,629	2,614	2,599	2,599	2,599							
Diluted Earnings Per Share(USD)	14.87	23.86	25.61	29.61	33.56							
Dividends Per Share(USD)	0.00	2.00	2.23	2.53	2.88							

Meta Platforms Inc Class A META ★★★★★ 6 Mar 2025 22:50, UTC

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ESG Risk Rating Breakdown

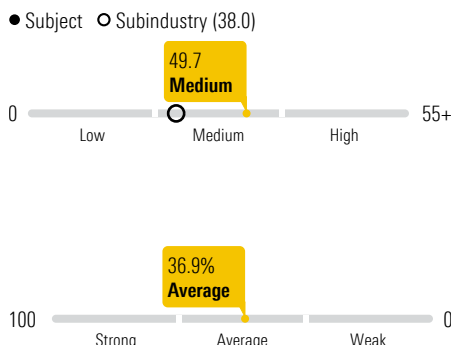
Exposure

Company Exposure ¹	49.7	
- Manageable Risk	45.8	
Unmanageable Risk²	3.9	

Management

Manageable Risk	45.8	
- Managed Risk ³	16.9	
Management Gap⁴	28.9	

Overall Unmanaged Risk 32.7



- ▶ Exposure represents a company's vulnerability to ESG risks driven by their business model
- ▶ Exposure is assessed at the Subindustry level and then specified at the company level
- ▶ Scoring ranges from 0-55+ with categories of low, medium, and high-risk exposure
- ▶ Management measures a company's ability to manage ESG risks through its commitments and actions
- ▶ Management assesses a company's efficiency on ESG programs, practices, and policies
- ▶ Management score ranges from 0-100% showing how much manageable risk a company is managing

ESG Risk Rating



ESG Risk Ratings measure the degree to which a company's value is impacted by environmental, social, and governance risks, by evaluating the company's ability to manage the ESG risks it faces.

1. A company's Exposure to material ESG issues 2. Unmanageable Risk refers to risks that are inherent to a particular business model that cannot be managed by programs or initiatives 3. Managed Risk = Manageable Risk multiplied by a Management score of 36.9% 4. Management Gap assesses risks that are not managed, but are considered manageable 5. ESG Risk Rating Assessment = Overall Unmanaged Risk = Management Gap plus Unmanageable Risk

ESG Risk Rating Assessment⁵



ESG Risk Rating is of Mar 05, 2025. Highest Controversy Level is as of Feb 08, 2025. Sustainalytics Subindustry: Internet Software and Services. Sustainalytics provides Morningstar with company ESG ratings and metrics on a monthly basis and as such, the ratings in Morningstar may not necessarily reflect current Sustainalytics' scores for the company. For the most up to date rating and more information, please visit: sustainalytics.com/esg-ratings/.

Peer Analysis 05 Mar 2025

Peers are selected from the company's Sustainalytics-defined Subindustry and are displayed based on the closest market cap values

Company Name	Exposure	Management	ESG Risk Rating
Meta Platforms Inc	49.7 Medium 0 —●— 55+	36.9 Average 100 —●— 0	32.7 High 0 —●— 40+
Alphabet Inc	44.1 Medium 0 —●— 55+	46.8 Average 100 —●— 0	24.9 Medium 0 —●— 40+
Match Group Inc	32.2 Low 0 —●— 55+	50.9 Strong 100 —●— 0	16.9 Low 0 —●— 40+
Snap Inc	39.3 Medium 0 —●— 55+	52.9 Strong 100 —●— 0	20.0 Medium 0 —●— 40+
Pinterest Inc	35.3 Medium 0 —●— 55+	53.4 Strong 100 —●— 0	17.8 Low 0 —●— 40+

Appendix

Historical Morningstar Rating

Meta Platforms Inc Class A META 6 Mar 2025 22:50, UTC

Dec 2025	Nov 2025	Oct 2025	Sep 2025	Aug 2025	Jul 2025	Jun 2025	May 2025	Apr 2025	Mar 2025	Feb 2025	Jan 2025
—	—	—	—	—	—	—	—	—	★★★★	★★★	★★★
Dec 2024	Nov 2024	Oct 2024	Sep 2024	Aug 2024	Jul 2024	Jun 2024	May 2024	Apr 2024	Mar 2024	Feb 2024	Jan 2024
★★★	★★★	★★★	★★★	★★	★★	★★	★★	★★★	★★	★★	★★
Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★★	★★★★	★★★★	★★★★★
Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★★★★	★★★★	★★★★	★★★	★★★	★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★★	★★★	★★★

Alphabet Inc Class A GOOGL 6 Mar 2025 22:41, UTC

Dec 2025	Nov 2025	Oct 2025	Sep 2025	Aug 2025	Jul 2025	Jun 2025	May 2025	Apr 2025	Mar 2025	Feb 2025	Jan 2025
—	—	—	—	—	—	—	—	—	★★★★	★★★★	★★★★
Dec 2024	Nov 2024	Oct 2024	Sep 2024	Aug 2024	Jul 2024	Jun 2024	May 2024	Apr 2024	Mar 2024	Feb 2024	Jan 2024
★★★★	★★★★	★★★★	★★★★	★★★★	★★★	★★★	★★★	★★★	★★★	★★★★	★★★★
Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★★
Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★★★★	★★★★	★★★★	★★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★★★★	★★★	★★★★	★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★
Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★★★	★★★	★★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★★	★★★	★★★

Snap Inc Class A SNAP 6 Mar 2025 22:54, UTC

Dec 2025	Nov 2025	Oct 2025	Sep 2025	Aug 2025	Jul 2025	Jun 2025	May 2025	Apr 2025	Mar 2025	Feb 2025	Jan 2025
—	—	—	—	—	—	—	—	—	★★★★	★★★★	★★★
Dec 2024	Nov 2024	Oct 2024	Sep 2024	Aug 2024	Jul 2024	Jun 2024	May 2024	Apr 2024	Mar 2024	Feb 2024	Jan 2024
★★★	★★★	★★★	★★★★	★★★★	★★★	★★★	★★★	★★★	★★★	★★★★	★★★
Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★★
Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★★★★	★★★★	★★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★
Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★	★	★	★★	★★★	★★	★★	★★★	★★★	★★★★	★★★	★★

Pinterest Inc Class A PINS 6 Mar 2025 22:52, UTC

Dec 2025	Nov 2025	Oct 2025	Sep 2025	Aug 2025	Jul 2025	Jun 2025	May 2025	Apr 2025	Mar 2025	Feb 2025	Jan 2025
—	—	—	—	—	—	—	—	—	★★★★	★★★	★★★★
Dec 2024	Nov 2024	Oct 2024	Sep 2024	Aug 2024	Jul 2024	Jun 2024	May 2024	Apr 2024	Mar 2024	Feb 2024	Jan 2024
★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★	★★★	★★★★	★★★	★★★	★★★
Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★★★	★★★★	★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★★★★	★★★★	★★★★	★★★★	★★★★	★★★	★★★	★★★	★★★	★★★	★★	★★
Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★★	★★	★★	★★	★★★	★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★

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. 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 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: (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 single-point 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 re-

turns 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 mid-cycle basis. If we deem the probability of occurrence sufficiently high, we would not characterize the company as possessing an economic moat.

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.

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 working capital accounts, and capital spending. Based on these projections, we calculate earnings before interest, after taxes (EBI) and the net new investment (NNI) to de-

rive 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

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 any-

Morningstar Equity Research Star Rating Methodology



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thing 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	★★★★★ Rating	★ Rating
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.

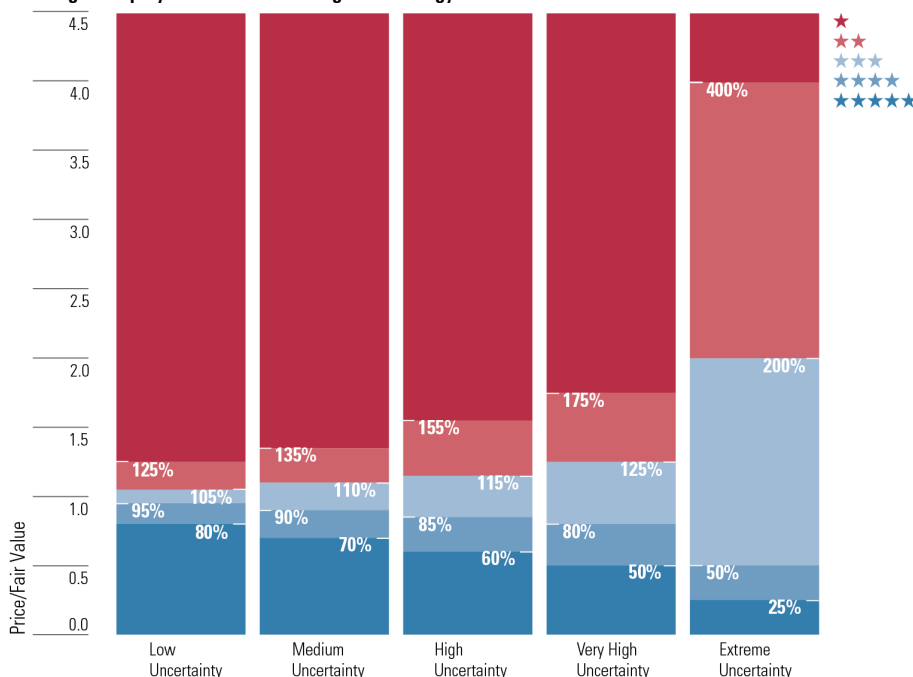
4. Market Price

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

Morningstar Equity Research Star Rating Methodology



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 ad-

justed 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 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 compan-

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ies' 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.

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.

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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.

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