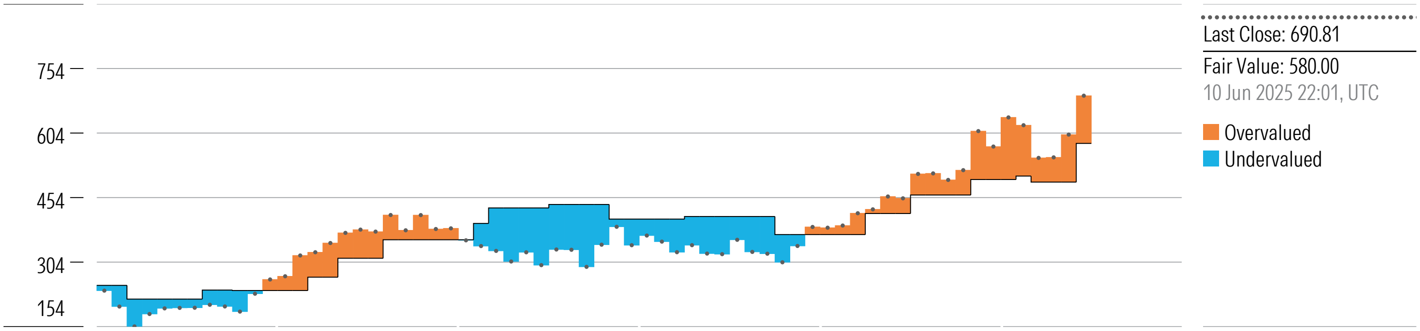
Morningstar Equity Analyst Report | Report as of 29 Jun 2025 23:28, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC. Page 1 of 26

The Goldman Sachs Group Inc GS ★★ 27 Jun 2025 21:25, UTC

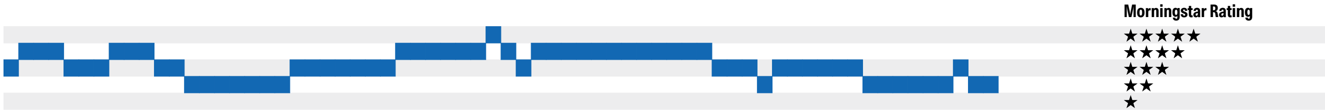
Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
690.81 USD 27 Jun 2025	580.00 USD 10 Jun 2025 22:01, UTC	1.19	211.97 USD Bil 27 Jun 2025	Wide	Large Value	High	Standard	4 Jun 2025 05:00, UTC

Price vs. Fair Value



	2020	2021	2022	2023	2024	YTD	
	1.11	1.07	0.85	1.05	1.15	1.19	Price/Fair Value
	16.87	47.53	-7.89	15.40	51.42	21.69	Total Return %

Morningstar Rating



Total Return % as of 27 Jun 2025. Last Close as of 27 Jun 2025. Fair Value as of 10 Jun 2025 22:01, UTC.

Contents

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

US Banks' Stress Test Results Look Favorable, With Goldman, Wells Fargo Performing Particularly Well

Analyst Note Sean Dunlop, CFA, Director, 29 Jun 2025

The Federal Reserve released its annual stress test results on Friday, June 27. With significantly stronger results compared with a year ago, the shares of the 22 tested institutions traded slightly higher in after hours trading.

Why it matters: The test results estimate the maximum capital drawdown that banks are likely to experience during a severely adverse scenario, which in turn informs the level of stress capital buffer they are required to hold for the ensuing year.

- Lower capital requirements correspond with higher leverage and higher returns for banks, which may elect to return excess capital to shareholders, generally through share repurchases.
- After Friday's test, we estimate that the banks in our coverage will see their stress capital buffers decline by about 40 basis points on average, provided that the Fed's proposal to average stress test results over two consecutive years, in order to reduce volatility, is implemented, or 65 basis points otherwise.

The bottom line: A less punitive stress scenario and strong capitalization across our banking coverage means that the average bank we cover could hold as much as 5% of its market capitalization in excess capital that could theoretically be returned to shareholders.

- Wide-moat-rated Goldman Sachs and wide-moat Wells Fargo were the biggest winners, with our

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Sector	Industry
Financial Services	Capital Markets

Business Description

Goldman Sachs is a storied financial institution, founded in 1869 and best known for its role as a leading global investment bank. The firm has a sprawling reach across global financial centers and has been the leading provider of global merger and acquisition advisory services, by revenue, for the past 20 years. Since the global financial crisis, Goldman has expanded its offerings into more stable fee-based businesses like asset and wealth management, which comprised roughly 30% of post-provision revenue at the end of 2024. The bank holding company generates revenue from investment banking, global market making and trading, lending, asset management, wealth management, and a small and declining portfolio of consumer credit card loans.

estimates suggesting these two banks will see their stress capital buffers fall by 1.5 and 1.2 percentage points, respectively, in October.

- Our optimism is, however, tempered by overvaluation. While returning capital to shareholders can improve a firm's returns on equity regardless of price, we'd prefer that the banks don't repurchase $1 worth of shares for $1.25, which is what they would effectively be doing at our market-cap-weighted fair value estimates.

Business Strategy & Outlook Sean Dunlop, CFA, Director, 10 Jun 2025

Goldman Sachs has reorganized its business around two core segments: global banking and markets, or GBM, and asset and wealth management, or AWM. The move reflects a push away from consumer banking, which looks appropriate after years of costly losses. Looking ahead, Goldman is leaning into its role as a leading global investment bank, deepening its relationships with large clients and growing its base of recurring, fee-based revenue to help mitigate the cyclicality inherent in its core business lines. We take a positive view of the pivot, which leverages Goldman's marquee brand and trading prowess while offering increasing exposure to the attractive wealth management business.

In GBM, Goldman has grown its (proportionately) more stable equity and fixed income, currency, and commodities, or FICC, financing businesses significantly, to $9.1 billion in 2024 revenue from just $4.2 billion in 2020, deepening relationships with institutional clients amid market displacements from the meltdown of Archegos Capital and a broader pullback by European peers. It now maintains top 3 trading relationships with 120 of the largest 150 global trading clients, up from roughly 75 in 2019, which provides significant ecosystem benefits. In investment banking, Goldman maintains the top perch in mergers and acquisitions advisory—as it has for more than 20 consecutive years—and has seen its consolidated market share grow to 9.5% over the past five years, from just north of 7% in the five years following the global financial crisis.

Despite GBM success, we appreciate its emphasis on more stable, fee-based revenue in the AWM segment, which represented 30% of 2024 post-provision revenue. The wealth business, with $1.6 billion in assets under supervision at the end of 2024, looks particularly attractive, and the firm's strong share among sticky ultra-high-net-worth clients is enviable despite the segment's smaller scale relative to competitors. Our main gripe with the firm's strategy is its persistence in continuing to make principal investments at all, which require significant capital allocation and are ROE dilutive—although returns should improve as the monetization environment does.

Bulls Say Sean Dunlop, CFA, Director, 10 Jun 2025

- Investments in technology could drive the firm's compensation ratio to tick below its targeted 30% over time.
- Alternative asset sponsors have between roughly $1 trillion and $3 trillion in dry powder on their

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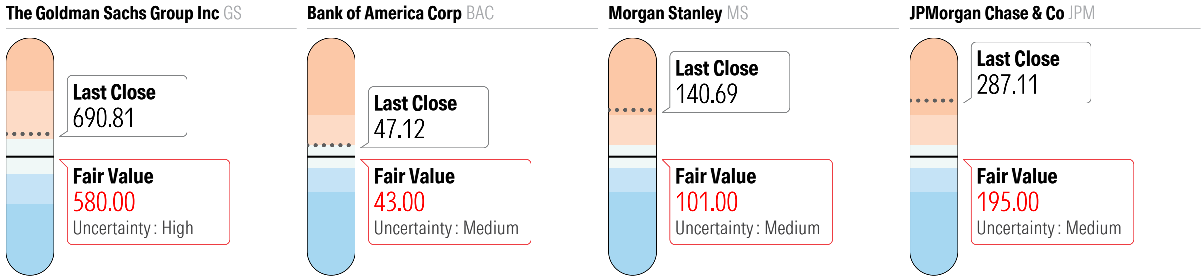
Competitors



	The Goldman Sachs Group Inc GS	Bank of America Corp BAC	Morgan Stanley MS	JPMorgan Chase & Co JPM
Economic Moat	Wide	Wide	Narrow	Wide
Currency	USD	USD	USD	USD
Fair Value	580.00 10 Jun 2025 22:01, UTC	43.00 4 Feb 2025 23:19, UTC	101.00 21 Mar 2025 20:28, UTC	195.00 24 Jan 2025 21:20, UTC
1-Star Price	899.00	58.05	136.35	263.25
5-Star Price	348.00	30.10	70.70	136.50
Assessment	Overvalued 27 Jun 2025	Fairly Valued 27 Jun 2025	Overvalued 27 Jun 2025	Overvalued 27 Jun 2025
Morningstar Rating	★★27 Jun 2025 21:25, UTC	★★★27 Jun 2025 21:26, UTC	★27 Jun 2025 21:23, UTC	★27 Jun 2025 21:24, UTC
Analyst	Sean Dunlop, Director	Suryansh Sharma, Senior Equity Analyst	Brett Horn, Senior Equity Analyst	Suryansh Sharma, Senior Equity Analyst
Capital Allocation	Standard	Standard	Exemplary	Exemplary
Price/Fair Value	1.19	1.10	1.39	1.47
Price/Sales	4.19	3.59	3.77	4.75
Price/Book	2.04	1.30	2.33	2.41
Price/Earning	15.66	13.73	16.40	15.39
Dividend Yield	1.74%	2.21%	2.63%	1.76%
Market Cap	211.97 Bil	354.90 Bil	225.71 Bil	797.90 Bil
52-Week Range	437.37—694.20	33.07—48.08	90.94—142.03	190.90—289.41
Investment Style	Large Value	Large Value	Large Value	Large Value

balance sheets, which could drive an M&A super cycle in a more accommodating investment environment.

- Investment banking consolidation around a small group of scaled global banks with integrated institutional trading desks could drive the exit of large but subscale peers and significant share gains.

Bears Say Sean Dunlop, CFA, Director, 10 Jun 2025

- Trading revenue has been elevated for some time and could reset much lower in a risk-off or low-volatility environment.
- US financial services firms could see retaliation or long-term share losses tied to trade tensions.
- Subsequent banking regulation could increase risk-weighted assets, capital requirements, or otherwise disadvantage traditional banks at the expense of more lightly regulated foreign competitors or nonbank financial institutions.

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Economic Moat Sean Dunlop, CFA, Director, 10 Jun 2025

We believe that Goldman Sachs warrants a wide economic moat rating, suggesting that it is more likely than not to generate risk-adjusted profits over the next 20 years. As we see it, the firm has built a defensible brand intangible asset around its storied investment banking arm and benefits from durable switching costs in its asset and wealth management operations. Our view is corroborated by average returns on equity of 12% over the past five years, comfortably edging its 9.5% cost of equity despite a historically challenging industry backdrop in 2022-23. We expect future returns to strengthen further, with the firm's long-term 14% to 16% through-the-cycle ROE targets looking achievable as Goldman exits its consumer banking misadventure, as its asset-light wealth management business continues to grow, as the bank achieves scale in select alternative asset management strategies, and as it exits a large swath of capital-intensive legacy principal investments by year-end 2026.

Goldman's business exists in three parts today, but only two that should matter to long-term investors with the wind-down of its consumer portfolio: global banking and markets, and asset and wealth management. The former can be roughly decomposed into investment banking and institutional trading, although the two are quite tightly intertwined, while the latter can be broken down into asset management—predominately alternative asset management and fixed-income—and wealth management. We believe that both segments warrant a wide moat on a consolidated basis, although we see some nuance in each. Institutional trading, for instance, is significantly less moaty than investment banking when considered in isolation but is a crucial part of the composite value proposition, attracting institutional investors to the Goldman Sachs ecosystem and helping it both successfully distribute initial public offering shares and raise capital for asset management funds. Further, asset management would probably be a narrow-moat segment on its own, but serves to increase switching costs in the competitively advantaged ultra-high-net-worth, or UNHW, wealth management business and deepens relationships with alternative asset fund sponsors that might, in turn, favor Goldman's investment bank for M&A advisory or acquisition financing services. Altogether, we view the comprehensive Goldman Sachs ecosystem as extremely difficult to disrupt and view the firm as a long-term winner in an industry that continues to coalesce around a cadre of scaled global winners.

Before diving into segment level competitive advantages, it's important to address the risk of economic value destruction—a key risk that has led to some trepidation in awarding wide economic moats to investment banks in the past. Overall, we continue to view caution as prudent but also note that the system is substantially better capitalized and more liquid than in any historical period. Changes since the global financial crisis have significantly curtailed investment banking profitability but have also reigned in the volatility of results. There are two key drivers of this dynamic: requirements that banks hold more regulatory capital to protect themselves during a downturn and restrictions on their participation in riskier trading and investing activities.

For Goldman Sachs specifically, return on equity on a consolidated basis has basically halved between pre-global financial crisis and 2024, largely reflective of leverage (measured as average assets over shareholder equity) declining to 12-14 times in recent years from as high as 31 times around the turn of the century. Further, as a bank holding company, Goldman is required to hold just shy of 14% of its risk-weighted assets—themselves significantly higher due to changes in Basel III regulations—in common equity. This provides a substantial, high-quality cushion in the event of a serious downturn. Risks within the firm's security and lending books are also significantly lower today. Goldman is no longer permitted to engage in proprietary trading, for example, and its investments in riskier assets like private equity and hedge funds are limited by Dodd-Frank regulation to just 3% of its Tier 1 capital base. These factors, married with a mix shift toward more stable fee-generating asset and wealth management and profitability even during the nadir of the global financial crisis, give us confidence that Goldman Sachs should avoid material value destruction even amid another catastrophic meltdown, and allow us to consider a wide moat horizon for excess returns if the quantitative evidence and qualitative narrative support it.

Pivoting to a segment-by-segment analysis, we believe that Goldman Sach's global banking and markets segment (roughly 60% of projected midcycle profit) warrants a wide economic moat rating, largely attributable to a self-reinforcing brand intangible asset in investment banking. More concretely, the Goldman Sachs brand allows the firm to compete for coveted lead underwriter roles in the most profitable and differentiated segments of investment banking: merger and acquisition advisory, and equity underwriting (particularly for IPOs). In our view, the Goldman Sachs brand confers legitimacy on an offering, while the firm's deep institutional relationships and global trading capabilities allow it to profitably underwrite and place even the most complex offerings. It's no coincidence, as a result, that the firm is involved in roughly one third of global M&A transactions by announced deal value, per Dealogic, and that it has maintained its place as the global leader in M&A advisory over each of the past 20 years. Participation in the most lucrative and high-profile deals, in turn, attracts the most productive bankers in something of a virtuous cycle, rendering it prohibitively difficult for boutique investment banks (like no-moat Jefferies) to crack the top five spots in the investment banking league table, frequently dominated by Goldman Sachs, JPMorgan, Morgan Stanley, Bank of America, and Citigroup.

In investment banking, firms compete on the basis of reputation, experience, distribution, market making capabilities, fees, research, and after-offering services, which together underpin modest pricing power. While competition is intense, the largest deals require capability, reach, relationships, and a balance sheet that only the biggest global banks can provide. It's no coincidence, in our view, that revenue share has very gradually consolidated around those big banks, and with companies staying private for longer—and going public when larger as a result—we expect the balance of power to continue to tilt gradually toward the largest global banks for the foreseeable future. To this effect, the largest 10 banks captured 46% of industry revenue in 2024 (Dealogic), and Goldman has seen its global market share grow from 7.2% in the five years following the global financial crisis to 9.5% on average during the most recent half-decade. Most importantly, the return profile is extremely healthy, if volatile, with investment banking generating a 25% average return on equity when disaggregated—that is, between 2008 and 2021—comfortably in excess of the firm's 9.5% cost of equity.

Institutional trading and market making, by contrast, is more or less a cost of capital business in the aftermath of the global financial crisis, generating an average 9.4% return on equity when disaggregated (or 10.6% excluding 2008). In this segment, the firm both executes trades for clients and acts as a counterparty when needed, committing capital and taking risk to mediate client trades across fixed income, currency, commodities, equities, and derivative products. Any moat here, on a standalone basis, would be derived from a scale-driven cost advantage, a network effect (trading liquidity begets liquidity), or switching costs, predominately in prime brokerage. The lack of quantitative support, client preference for multi-homing, and presence of a handful of viable global competitors seems to short-circuit those arguments, although the trading desk remains a critical part of the Goldman ecosystem and is, at worst, economic profit neutral.

To illustrate the ecosystemic benefits of trading, Goldman Sachs might choose, for example, to provide a valued client with complex, custom derivative exposure through its trading desk at a risk-adjusted loss, to strengthen a relationship that could stretch across the firm's suite of financial services. A massive counterparty like Fidelity, for example, could subscribe to an IPO's where Goldman is the lead underwriter, lending cachet to the cap table and helping ensure a successful issuance. It might also pay for Goldman research, utilize the firm's prime brokerage services, and allow its brokerage customers to invest in Goldman funds. Goldman, in turn, might provide the firm with access to attractive, oversubscribed issues, allow it to tap into the bank's liquidity at better prices than it would receive from lit trading venues, and could help it hedge unwanted risk exposures with bespoke derivative products. As a result, we tend to view institutional trading as inextricably intertwined with the remainder of the Goldman ecosystem, and as an essential component of that system. It's no coincidence, in our view, that the firm's four largest institutional trading competitors are also its largest competitors in investment banking, as competency in those businesses appear to be interrelated. Taken together, as we believe is appropriate, the global banking and markets segment (investment banking plus institutional trading) has generated an average ROE of 14% over the past decade, with a significantly lower standard deviation of returns than either business generated independently. We project 15% average annual segment returns on equity over the decade to come.

Turning to asset and wealth management (40% of projected midcycle profit), we believe that the segment also warrants a wide economic moat, predominately attributable to switching costs and, to a lesser extent, to intangible assets. With $3.1 trillion in assets under supervision, and $1.6 trillion in wealth management assets at year-end 2024, Goldman is now one of the larger asset and wealth managers in our coverage, if significantly smaller than household names like Charles Schwab, Bank of America, and Morgan Stanley. This segment's results remain slightly depressed by recently low realization rates in alternative asset management and by the winddown of its historical principal investment portfolio but should achieve midcycle returns around 15% to 16%, by our math, and average returns on equity of 13% over the decade to come.

In asset management (45% of segment sales), the firm's product suite runs the gamut of alternative assets, active fixed income, active equity, and liquidity products, and the combination of attractive product mix and strong organic inflows point toward an intangible asset moat. By our math, 67% of the firm's long-term assets under management at the end of 2024 sat in the relatively attractive alternative asset and fixed income categories, where the firm has seen very healthy 4.9% and 3% average annual organic inflows since 2017. Even active equity, a secularly pressured category, has enjoyed 2.4% average annual organic inflows over that period, attesting to a strong investment track record and likely intangible asset moat source. In asset management, Goldman benefits to some extent from switching costs—both implicitly from accrued capital gains and more explicitly from lockup periods or redemption gates in its alternative asset funds. On a standalone basis, Goldman Sachs' asset management would likely warrant a narrow economic moat but provides the firm with particular benefit for its distribution of proprietary funds to wealth management clients, reinforcing switching costs in that high-return, growing segment.

Wealth management (55% of segment sales) is a very attractive business, with relationships between financial advisors and clients creating significant inertia. For financial advisors, switching costs are more explicit, with advisors relinquishing around 20% of their client assets upon departure (Cerulli) to unplanned churn and having to learn new trading and bookkeeping systems with their new firm. For clients, churn rates are exceedingly low—with client retention tending to clock in between 95% to 100% (LPL Financial disclosures) through the cycle—indicative of switching costs or fairly powerful inertia. Notably, wealthier clients also tend to be the stickiest, with Morgan Stanley disclosing 99% retention among clients with more than $1 million in assets. This makes some qualitative sense. High-net-worth, or HNW, and UHNW clients would be far more likely to value high-touch, bundled services that come with more explicit switching costs, like estate planning, cash management, and philanthropic advisory. They're more likely to care about product access, tax harvesting through separately managed accounts, or SMAs, or execution of trust accounts. To illustrate switching costs for this cohort, a UHNW customer leaving Goldman Sachs for, say, Morgan Stanley might have to unwind a good chunk of SMA holdings, incurring taxable gains, sell or re-underwrite fixed income securities that the Morgan Stanley team wasn't involved in underwriting at conception (they can't simply "inherit" the Goldman thesis), gradually sell down alternative asset holdings, unwind any bespoke hedges or structured notes, and secure consent from beneficiaries or even court approvals to move around trust accounts. Instead, most prefer to avoid the headache altogether, sticking with a wealth manager until intergenerational wealth transfer nexus points—and often after. With an average account balance of $70 million, a minimum account size of $10 million, and 54% of the firm's supervised assets at the end of 2024 sitting in stickier SMA wrappers, we believe that Goldman Sach's wealth management business is in enviable shape. It has grown its asset base at a nearly 15% compound annual growth rate since 2008 (BCG estimates) and looks set for strong, high-single-digit growth for the foreseeable future, driven by market appreciation and modest organic inflows.

Finally, the platform solutions segment, largely composed of the remainder of the failed consumer bank initiative, is a capital-destructive—think negative moat—segment that's in runoff mode. It is no longer financially material, and similar forays look prohibitively unlikely after this expensive experiment.

Taken together, Goldman Sachs looks to us like a wide-moat franchise, and our projected return profile aligns closely with that of wide moat competitors like JPMorgan and Bank of America. The investment banking business is less profitable but less risky than it has been historically, and the steady growth of capital-light, fee-generative businesses like third-party asset management and wealth management should diversify the firm's revenue streams and render midteens through-the-cycle returns on equity achievable.

Fair Value and Profit Drivers Sean Dunlop, CFA, Director, 10 Jun 2025

We are raising our fair value estimate for Goldman Sachs to $580 from $490, reflective of our upgraded economic moat rating, our expectation that the firm should achieve the lower end of its 14% to 16% ROE targets (up from an 11% midcycle forecast previously), and stronger long-term margin projections, as we now expect the firm to achieve its long-term 60% efficiency ratio target by the end of the decade. We use a 9.5% cost of equity in our valuation, which corresponds with a 1.7 times price/book ratio.

Our expectations contemplate long-term growth in investment banking and trading of 3% annually, 4.7% annual growth in asset and wealth management, and slightly softer 2.9% annual growth in net interest income, with the latter attributable to our expectations for declining medium-term interest rates. Taken together, those forecasts result in 3.5% annual growth in post-provision net revenue over the decade to come. Within those forecasts, we expect a strong medium-term rebound in investment banking revenue, driven by the deployment of significant volume of dry powder by alternative asset sponsors as interest rates fall and valuations look more enticing, while we expect a proportionate drag from trading revenue, which remains at peak cycle levels. In the asset and wealth management segment, we envision some benefit from the monetization of maturing alternative asset funds, which should drive higher incentive fee recognition and recognized revenue in on-balance-sheet equity and debt investments over the next few years.

Turning to profitability, we view the firm's long-term targets for a 30% compensation ratio (compensation over post-provision revenue) and a 60% efficiency ratio (noninterest expenses over post-provision revenue) as achievable, albeit not until deep into the back half of our 10-year forecast. As we see it, investments in technology have gradually shifted the balance of power toward brands—investment banks—and away from star bankers, allowing for modest margin leverage over the compensation ratio over time, and we see little in today's competitive environment that would suggest that a reversal of this trend is likely. This implies that we expect a significant 490 basis points of margin expansion between 2024 and 2034, or roughly 300 basis points excluding the quickly easing drag from the firm's consumer banking winddown.

Finally, we expect the firm to modestly increase its leverage over the decade to come, with our estimates calling for just north of 15 times leverage by the end of the decade, up from roughly 14 times at the end of 2024. This should allow the firm to release some excess capital to shareholders over the next few years, but is contingent on a successful winddown of historical principal investments and better stress test results.

Risk and Uncertainty Sean Dunlop, CFA, Director, 10 Jun 2025

We're raising our Uncertainty Rating for Goldman Sachs to High from Medium, consistent with our quantitative methodology as well as our qualitative assessment that the firm's exposure to highly cyclical end markets like investment banking and trading adds substantial uncertainty to our forecasts. Our rating also captures the temporary impact of an uncertain equilibrium in global trade: while the US is a net goods importer by a wide margin, it is a net services exporter, and it is feasible that a protracted trade war could inspire retaliation that affects US financial services businesses. Provided that this uncertainty eases, we will revisit these assumptions and note that Goldman's business bears significantly less risk than it did 15 or 20 years ago due to less risky trading activities, more revenue diversification, and lower leverage.

Consistent with other large, geographically diversified US banks, Goldman's operations serve as something of a barometer for global economic health. Consequently, the firm is exposed to exogenous variables like economic growth, interest rates and borrowing appetite, volatility, and asset price levels. The firm's fee-based businesses are most exposed, with substantial cyclicality in both investment banking and institutional trading adding uncertainty to our cash flow forecasts.

We believe that the firm has only moderate exposure to environmental, social, and governance risks. The two largest exposures, in our view, are regulatory compliance and human capital management. Fines and litigation are part of the business model for banks, but compliance with FCPA, AML, and KYC measures are especially important. To this effect, the firm's 1MDB exposure cost the bank more than $5 billion in cumulative fines. Regarding the latter, competition for talent in investment banking is intense, and maintenance of a top-tier workforce is critical for firms that plan to operate marquee investment banks.

Capital Allocation Sean Dunlop, CFA, Director, 10 Jun 2025

After considering the firm's performance against the three pillars of our Morningstar Capital Allocation framework, we believe that Goldman Sachs warrants a Standard rating. The firm looks adequately capitalized relative to its risk exposure, looks unlikely to create or destroy material shareholder value with its current investment strategy, and returns an appropriate amount of capital to shareholders.

Considering these in sequence, Goldman maintained a CET1 ratio of 15% at the end of 2024, against a regulatory requirement of 13.7%, suggesting adequate capitalization relative to its risk profile. With heavy exposure to trading and moderate exposure to on-balance-sheet investments in alternative assets (predominately private credit and private equity), the firm maintains one of the highest stress-capital buffers of the major banks, at 6.2%, although this should decline modestly over time as it sells its remaining historical principal investments by the end of 2026. We appreciate Goldman's efforts to diversify its revenue streams, with 30% of post-provision revenue derived from its asset and wealth management segment in 2024, up from roughly 15% during years following the global financial crisis.

Pivoting to investments, we award Goldman a fair rating. The firm's strategy, which strives to deepen trading relationships with the largest global financial institutions to generate business across the Goldman ecosystem, looks appropriate, as does the decision to exit consumer banking after years of costly losses. This view is corroborated by our forecast for ROE expansion to roughly 14% over the long term, from 12% in 2024. Offsetting this is operational risk, which skews to the downside for the bank. While the firm is taking appropriate steps to reduce costs, invest in technology, and position itself for a changing competitive environment, legal and operational risks definitively skew to the downside with a sprawling global footprint and labyrinthine, ever-evolving regulation with which the firm must remain in compliance.

Finally, shareholder distributions look appropriate, with an average total payout ratio of roughly 70% over the past five years. We expect a similar magnitude of returns (75% to 80% projected payout) over the five years to come, and don't believe that the firm is leaving any attractive investment opportunities on the table in a competitive global banking environment.

Taken together, a sound balance sheet, fair investment rating, and appropriate shareholder distributions underpin our Standard rating.

Analyst Notes Archive

Most US Banks Won't Benefit Directly From Enhanced Supplemental Leverage Ratio Changes Sean Dunlop, CFA,Director,26 Jun 2025

The Federal Reserve, with the support of the Office of the Comptroller of the Currency and the Federal Deposit Insurance, released draft changes to the enhanced supplemental leverage ratio today. The

Morningstar US Banks Index rose by 0.6% on the news, while the broader market was flat.Why it matters: The move is important largely for what it signals: that more consequential changes, like revisions to global systematically important bank surcharges and lower Basel III capital requirements, toward alignment with global standards, are increasingly likely. The eSLR changes don't look too consequential on a stand-alone basis, as all the banks in our coverage are currently constrained by common equity Tier 1—or Tier 1 leverage at the trust banks—rather than eSLR requirements. Neither do we believe that the move will spur meaningful incremental near-term growth. Despite purportedly freeing up significant capital at depositary institutions ($210 billion), the demand backdrop remains weak in the US, regardless of lending capacity, with just 3% annual loan growth last quarter.The bottom line: While eSLR changes aren't very significant for our coverage, Basel III changes, which are next in the pipeline, could be more so. In agreement with the market, we view the proposed regulation as very slightly positive, but don't expect to make changes to our intrinsic valuations across the sector, with our forecasts already largely pricing this in. A heightened willingness to hold low-risk, lower-return assets like Treasury is the biggest likely ramification of the proposed rule, as we see it. Elsewhere, we had estimated that the 2023 proposal would have resulted in 20% average growth in risk-weighted assets for banks in our coverage, while the September 2024 draft would have increased capital requirements by anywhere from 9% for G-SIB banks to 0.5% for smaller institutions. A revised framework is likely to yield even lower increases.

Goldman Sachs: Raising Our Fair Value Estimate and Economic Moat Rating After Fresh Look Sean Dunlop, CFA,Director,10 Jun 2025

We're transferring coverage of Goldman Sachs, a full-service global investment bank, to a new analyst. The bottom line: we're raising our economic moat rating to wide from narrow for Goldman Sachs, our fair value estimate to $580 from $490 per share, and our Uncertainty Rating to High from Medium. The firm is the global leader in mergers and acquisitions advisory and boasts nearly 10% share of the investment banking market by revenue. With a massive, global institutional trading and market making arm, Goldman is one of a small handful of banks that can reliably handle large global underwriting transactions. Global investment banking continues to consolidate around a small handful of large, global players, favoring banks like Goldman. Regulatory changes and revenue diversification have significantly derisked the business relative to its 2007-09 vintage. Key stats: We project 3.5% compound annual growth in post-provision net revenue, with particular strength in more stable, fee-based asset and wealth management (30% of 2024 revenue) at 4.7%. Between technology investments, modest operating leverage, and the winddown of the failed consumer banking experiment, we expect the firm to hit its 30% long-term compensation ratio target, albeit not until 2034. This drives our forecast for long-term operating margins around 40% and a midcycle return on equity just shy of 14%, roughly in line with the lower end of the firm's investor day targets for 14% to 16% through-the-cycle ROE.

Goldman Sachs Earnings: Strong Start to 2025 as Uncertainty Breeds Heightened Trading Activity

Brett Horn, CFA,Senior Equity Analyst,14 Apr 2025

Narrow-moat-rated Goldman Sachs reported a strong start to the year as near-constant shifts in market sentiment bred heightened volatility that produced exceptional trading revenue, effectively masking the tepid deal-making environment posing headwinds for investment banking. Despite strong quarterly results and a recent selloff alongside broader equity markets, we continue to see shares being modestly overvalued as we maintain our $490 fair value estimate.The company reported net income to common shareholders of $4.6 billion, or $14.12 per diluted share, on $15.1 billion of net revenue. Investment banking revenue declined 7% sequentially, and 8% year over year, as heightened macroeconomic uncertainty stalled the cyclical recovery in deal-making activity that has been underway. Despite these muted results, the global banking and markets segment holistically booked net revenue gains of 26% sequentially and 10% year over year, as continued developments in tariff policies spiked market volatility, enabling the FICC and equities businesses to generate historic revenues as clients repositioned their portfolios. While we forecast some normalization over the long run for both the trading and investment banking businesses, which we believe are currently over-earning and under-earning, respectively, we note that both trends may persist in the short term until markets attain more clarity surrounding shifts in global trade policy and their second-order geopolitical impacts.The asset and wealth management segment has become increasingly material for the consolidated entity, which we view favorably as management fees exhibit less cyclicality than investment banking fees. Segment results this quarter were mixed, as net revenue contraction of 22% sequentially and 3% year over year, was worse than expected considering assets are about 65% fixed income, but continued net inflows brought assets under supervision up to $3.17 trillion, increasing its long-run earnings potential.

US Blanket Tariffs Pose Significant Macroeconomic Risks and Are Unconditionally Bad for US Banks

Suryansh Sharma,Senior Equity Analyst,3 Apr 2025

President Donald Trump unleashed a barrage of tariffs on US trading partners that were significantly more aggressive and broader in scope than the market's expectation. US banks reacted negatively to the tariff announcements, and the US bank index was down more than 8%. Why it matters: The banking business is inherently tied to the macroeconomic performance of the US economy, and any negative impact on the economy will eventually percolate through the US banking industry's profitability. Economic slowdowns (or recessions) have a materially adverse impact on the US banking industry's loan growth, credit costs, investment banking fees, trading profitability, and asset management fees. The bottom line: Given the significant uncertainty associated with the tariff announcements, we are currently in the wait-and-see stance and do not plan to materially change our fair value estimates for US banks. While there are selective opportunities, US banks are fairly valued on average even after today's sharp correction, and we think investors should wait for a bigger margin of safety before going all-in into the sector. Big picture: If the current tariff regime remains in place in the long run, the US banking industry will certainly be hit hard, and the probability of recession will increase substantially. We estimate a midteens percentage fair value estimate decrease for the sector in a bear-case scenario, but the bank stocks can correct significantly more than that in the near term, given the hit to their profitability.

Goldman Sachs Earnings: Fairly Strong End to the Year; We Expect Continued Strength Michael Wong, CFA,Director,16 Jan 2025

Narrow-moat-rated Goldman Sachs reported a fairly strong end to 2024, and we expect continued strength in revenue despite US interest rates likely remaining relatively high and US policy uncertainty. The company reported net earnings to common shareholders of $13.5 billion, or $40.54 per diluted share, for the year. This produced a return on tangible equity of 13.5%. For the fourth quarter, net revenue sequentially increased 9% due primarily to equity investment gains and seasonal strength in investment banking revenue. We don’t anticipate making a material change to our $496 per share fair value estimate for Goldman Sachs and assess shares are slightly overvalued. While we expect continued strength in revenue over the next couple of years, shares are trading at about 1.8 times book value when return on equity for the year was only 12.7%, and the company still has work to do to meet its midteens ROE target.While there’s been a shift in the market view for interest rates, positive economic sentiment, which is a driver of Goldman Sachs' earnings, remains healthy. It’s pertinent to note that Goldman produced fairly strong revenue growth and earnings in 2024 when the effective federal-funds rate was 5.14%. Even if the rate isn’t cut as much as previously expected in 2025, it’s still starting the year at 4.33%, which is better than the 2024 average. While the equity markets may be back to interpreting good economic data, such as strong employment numbers, as bad for markets because it lessens the magnitude of rate cuts, good economic data is positive for most of Goldman Sachs’ business lines. Political uncertainty can cause some hesitation for investment banking, but it could also keep trading revenue high, and in the longer term, the strength of the economy is more a driver of earnings.

Goldman Sachs: Increasing Our Fair Value by 8% to $496 Due to a Stronger Capital Markets Outlook Michael Wong, CFA,Director,18 Nov 2024

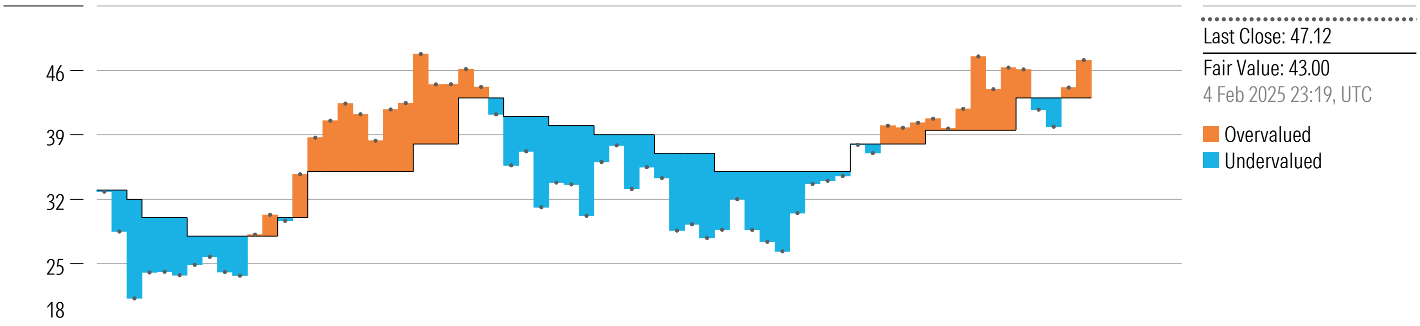
We are increasing our fair value estimate for narrow-moat-rated Goldman Sachs to $496 from $460 per share. This is about 12 times forward earnings and 1.6 times tangible book value. Of the net $36 increase in our fair value estimate, about $10 is from earnings since our previous valuation update, $7 is from changes in our revenue and expense forecasts, and $19 is from reducing our projected increase in regulatory capital.Over the next five years, we project net revenue to grow at an over 3.5% compound annual growth rate. Our year-five revenue is also around 5% lower than the revenue it booked in 2021, which was an abnormally strong year. We forecast less than 2% annual growth in trading and net interest income, as recent trading levels are arguably elevated and we assume Goldman Sachs will slow down the growth of or even decrease the size of its balance sheet in coming years.Barring a mania in the capital markets, we don't expect investment banking to approach 2021's level of over $14 billion in the foreseeable future. That said, we forecast investment banking revenue growing at around a 7.5% compound annual growth rate from the 2023 level of $6.2 billion. For asset-management revenue growth, we forecast modest revenue yield compression in the asset-management business and annual growth in assets under supervision of 6%-7%.In the long run, we project a gross leverage ratio of about 13.5 times, operating margins of 36%, and returns on tangible common equity of around 14%. The company has an operating margin goal of around 40% and a return on tangible common equity goal of 15%-17%. We model an across-the-cycle 32% compensation ratio and use a 9.5% cost of equity in our model.

Morningstar Equity Analyst Report | Report as of 29 Jun 2025 23:28, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC.

The Goldman Sachs Group Inc GS ★★ 27 Jun 2025 21:25, UTC

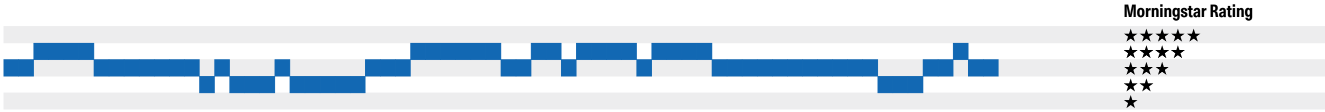
Competitors Price vs. Fair Value

Bank of America Corp BAC



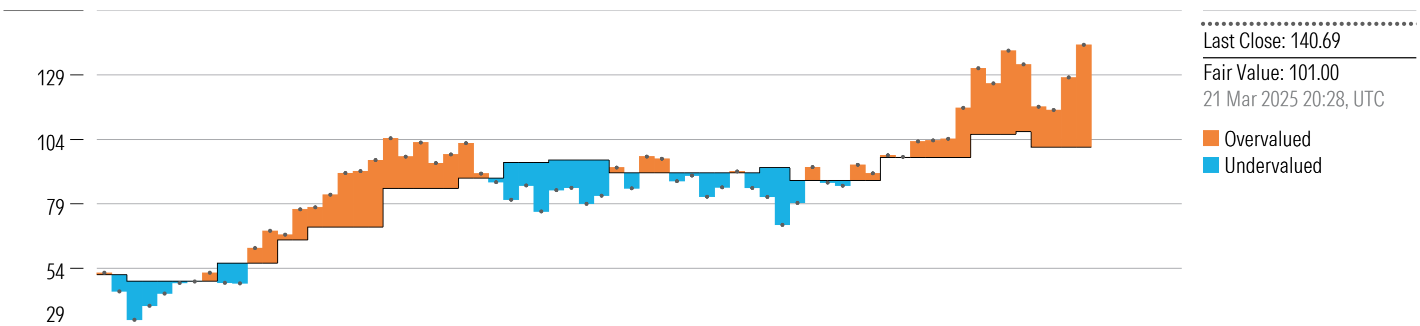
	2020	2021	2022	2023	2024	YTD
Price/Fair Value	1.08	1.17	0.85	0.96	1.11	1.10
Total Return %	-11.90	49.36	-23.62	4.44	33.50	8.40

Morningstar Rating



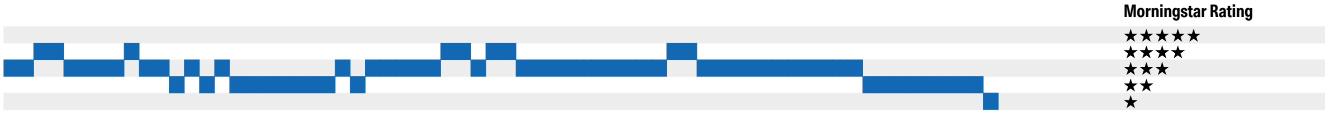
Total Return % as of 27 Jun 2025. Last Close as of 27 Jun 2025. Fair Value as of 4 Feb 2025 23:19, UTC.

Morgan Stanley MS



	2020	2021	2022	2023	2024	YTD
Price/Fair Value	1.22	1.15	0.93	1.06	1.19	1.39
Total Return %	36.80	46.30	-10.38	13.50	38.63	13.38

Morningstar Rating



Total Return % as of 27 Jun 2025. Last Close as of 27 Jun 2025. Fair Value as of 21 Mar 2025 20:28, UTC.

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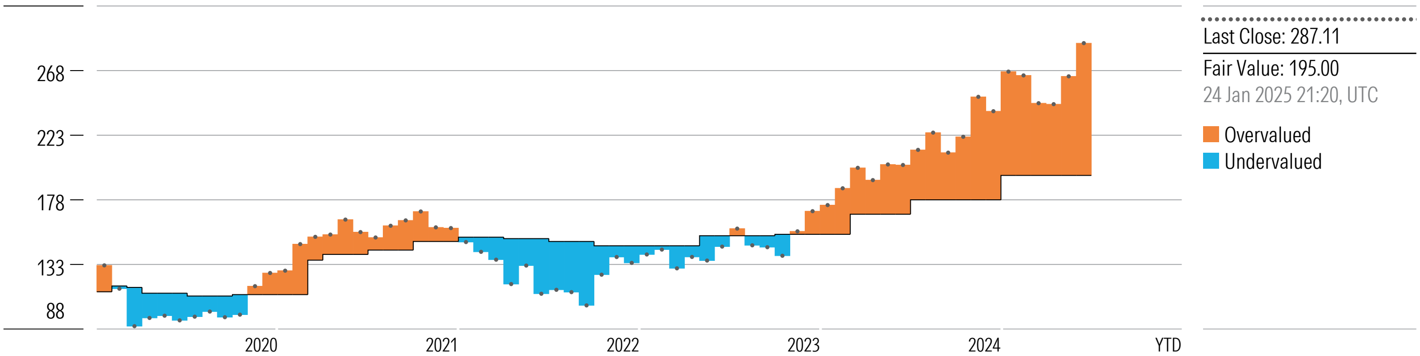
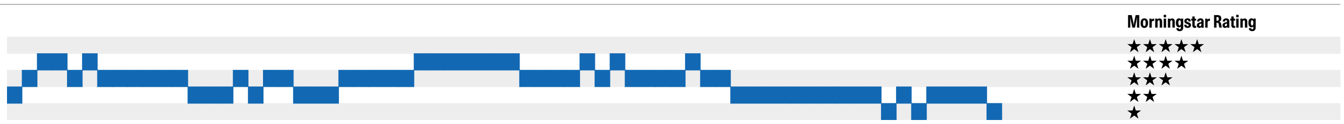
Competitors Price vs. Fair Value

JPMorgan Chase & Co JPM



	2020	2021	2022	2023	2024	YTD
Price/Fair Value	1.13	1.06	0.92	1.10	1.35	1.47
Total Return %	-6.26	27.53	-12.79	29.87	43.63	20.88



Total Return % as of 27 Jun 2025. Last Close as of 27 Jun 2025. Fair Value as of 24 Jan 2025 21:20, UTC.

Morningstar Equity Analyst Report | Report as of 29 Jun 2025 23:28, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC. Page 17 of 26

The Goldman Sachs Group Inc GS ★★ 27 Jun 2025 21:25, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
690.81 USD 27 Jun 2025	580.00 USD 10 Jun 2025 22:01, UTC	1.19	211.97 USD Bil 27 Jun 2025	Wide	Large Value	High	Standard	4 Jun 2025 05:00, UTC

Morningstar Valuation Model Summary

Financials as of 10 Jun 2025	Actual			Forecast				
Fiscal Year, ends 31 Dec	2022	2023	2024	2025	2026	2027	2028	2029
Net Interest Income (USD Mil)	7,678	6,351	8,056	11,616	10,220	10,961	10,899	10,887
Non Interest Income (USD Mil)	39,687	39,903	45,456	45,118	40,895	43,375	47,058	50,767
Total Pre-Provision Revenue (USD Mil)	47,365	46,254	53,512	56,735	51,115	54,336	57,957	61,654
Provision for Loan Losses (USD Mil)	2,715	1,028	1,348	1,247	1,596	1,617	1,687	1,785
Operating Expenses (USD Mil)	31,164	34,487	33,767	35,249	32,569	33,918	35,366	37,102
Operating Income (USD Mil)	13,486	10,739	18,397	20,239	16,950	18,801	20,904	22,767
Net Income Available to Common Stockholders (USD Mil)	11,261	8,516	14,276	15,974	13,378	14,839	16,499	17,969
Adjusted Net Income (USD Mil)	10,764	7,907	13,525	15,339	12,722	14,155	15,783	17,222
Weighted Average Diluted Shares Outstanding (Mil)	358	346	334	334	334	334	334	334
Earnings Per Share (Diluted) (USD)	30.06	22.87	40.54	45.98	38.14	42.43	47.31	51.62
Adjusted Earnings Per Share (Diluted) (USD)	30.06	22.87	40.54	45.98	38.14	42.43	47.31	51.62
Dividends Per Share (USD)	9.00	10.50	11.50	12.30	14.49	17.22	20.40	22.95

Margins & Returns as of 10 Jun 2025		Actual			Forecast					
	3 Year Avg	2022	2023	2024	2025	2026	2027	2028	2029	5 Year Avg
Net Interest Margin %	0.5	0.5	0.4	0.5	0.7	0.6	0.6	0.5	0.5	0.6
Efficiency Ratio %	67.8	65.8	74.6	63.1	62.1	63.7	62.4	61.0	60.2	61.9
Provision as % of Loans	0.9	1.5	0.5	0.7	0.5	0.7	0.7	0.7	0.7	0.7

Growth & Ratios as of 10 Jun 2025		Actual			Forecast					
	3 Year Avg	2022	2023	2024	2025	2026	2027	2028	2029	5 Year Avg
Net Interest Income Growth %	7.6	18.7	-17.3	26.9	44.2	-12.0	7.2	-0.6	-0.1	6.2
Non Interest Income Growth %	-4.9	-24.9	0.5	13.9	-0.7	-9.4	6.1	8.5	7.9	2.2
Total Pre-Provision Revenue Growth %	—	-20.2	-2.4	15.7	6.0	-9.9	6.3	6.7	6.4	—
Operating Expenses Growth %	—	-2.4	10.7	-2.1	4.4	-7.6	4.1	4.3	4.9	—
Operating Income Growth %	—	-50.1	-20.4	71.3	10.0	-16.3	10.9	11.2	8.9	—
Net Income Growth %	-13.9	-47.9	-24.4	67.6	11.9	-16.3	10.9	11.2	8.9	—
Earnings Per Share Growth %	-12.0	-49.4	-23.9	77.3	13.4	-17.1	11.3	11.5	9.1	5.0

Valuation as of 10 Jun 2025	Actual			Forecast				
	2022	2023	2024	2025	2026	2027	2028	2029
Price/Earning	11.4	16.9	14.1	15.0	18.1	16.3	14.6	13.4
Price/Book	—	—	—	—	—	—	—	—
Price/Tangible Book	1.3	1.4	1.9	2.1	2.2	2.1	2.0	1.9
Dividend Yield %	2.7	2.0	1.7	1.8	2.1	2.5	3.0	3.3
Dividend Payout %	29.6	45.3	27.7	26.7	34.2	35.2	36.3	36.3

Operating Performance / Profitability as of 10 Jun 2025	Actual			Forecast				
Fiscal Year, ends 31 Dec	2022	2023	2024	2025	2026	2027	2028	2029
ROA %	0.8	0.5	0.9	0.9	0.7	0.8	0.8	0.9
ROE %	9.9	7.3	12.0	12.7	10.4	11.4	12.2	12.9
Return on Tangible Equity %	11.2	8.0	13.5	14.6	11.8	13.1	14.1	14.8

Morningstar Equity Analyst Report | Report as of 29 Jun 2025 23:28, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC. Page 18 of 26

The Goldman Sachs Group Inc GS ★★ 27 Jun 2025 21:25, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
690.81 USD 27 Jun 2025	580.00 USD 10 Jun 2025 22:01, UTC	1.19	211.97 USD Bil 27 Jun 2025	Wide	Large Value	High	Standard	4 Jun 2025 05:00, UTC

Financial Leverage (Reporting Currency)	Actual			Forecast				
Fiscal Year, ends 31 Dec	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Equity/Assets %	8.1	7.1	7.3	7.1	6.9	6.8	6.7	6.6

Forecast Revisions as of	2025		2026		2027	
Prior data as of	**Current**	**Prior**	**Current**	**Prior**	**Current**	**Prior**
Fair Value Estimate Change (Trading Currency)	580.00	—	—	—	—	—
Net Interest Income (USD Mil)	11,616	8,925	10,220	10,152	10,961	10,660
Total Pre-Provision Revenue (USD Mil)	56,735	56,209	51,115	59,683	54,336	62,713
Operating Income (USD Mil)	20,239	20,106	16,950	21,373	18,801	22,466
Net Income (USD Mil)	—	—	—	—	—	—
Earnings Per Share (Diluted) (USD)	45.98	45.96	38.14	49.00	42.43	51.62
Adjusted Earnings Per Share (Diluted) (USD)	45.98	45.96	38.14	49.00	42.43	51.62
Dividends Per Share (USD)	12.30	12.00	14.49	12.00	17.22	12.00

Key Valuation Drivers as of 10 Jun 2025	
Cost of Equity %	9.0
Stage II Net Income Growth Rate %	3.5
Stage II Incremental ROIC %	13.4
Perpetuity Year	20

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

Discounted Cash Flow Valuation as of 10 Jun 2025	**USD Mil**
Present Value Stage I	0
Present Value Stage II	0
Present Value of the Perpetuity	0
Total Common Equity Value before Adjustment	**0**
Other Adjustments	—
Equity Value	**186,561**
Projected Diluted Shares	334
Fair Value per Share (USD)	**580.00**

Morningstar Equity Analyst Report | Report as of 29 Jun 2025 23:28, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC.

The Goldman Sachs Group Inc GS ★★ 27 Jun 2025 21:25, UTC

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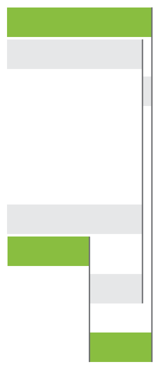
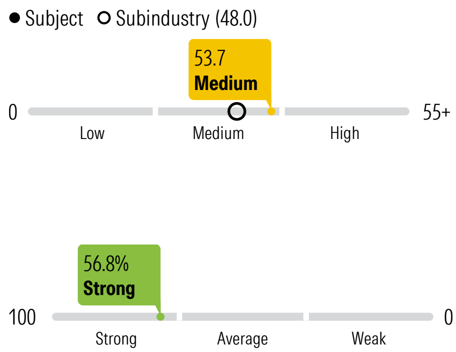
ESG Risk Rating Breakdown

Exposure	
Company Exposure[1]	53.7
– Manageable Risk	50.2
Unmanageable Risk[2]	**3.5**

Management	
Manageable Risk	50.2
– Managed Risk[3]	28.5
Management Gap[4]	**21.7**

Overall Unmanaged Risk	**25.2**

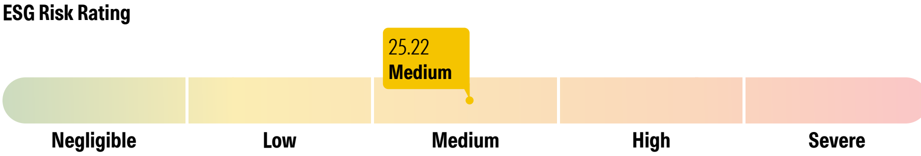




- Exposure represents a company's vulnerability to ESG risks driven by their business model
- Exposure is assessed at the Subindustry level and then specified at the company level
- Scoring ranges from 0-55+ with categories of low, medium, and high-risk exposure

- 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 56.8% 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 Assessment[5]

ESG Risk Rating is of Jun 04, 2025. Highest Controversy Level is as of Jun 08, 2025. Sustainalytics Subindustry: Investment Banking and Brokerage. 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 04 Jun 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
The Goldman Sachs Group Inc	53.7 | Medium (0–55+)	56.8 | Strong (100–0)	25.2 | Medium (0–40+)
Bank of America Corp	53.0 | Medium (0–55+)	59.1 | Strong (100–0)	23.8 | Medium (0–40+)
Morgan Stanley	53.5 | Medium (0–55+)	57.3 | Strong (100–0)	24.8 | Medium (0–40+)
JPMorgan Chase & Co	53.7 | Medium (0–55+)	52.9 | Strong (100–0)	27.3 | Medium (0–40+)
Stifel Financial Corp	49.7 | Medium (0–55+)	44.9 | Average (100–0)	28.7 | Medium (0–40+)

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Appendix
Historical Morningstar Rating

The Goldman Sachs Group Inc GS 27 Jun 2025 21:25, 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
★★★	★★★	★★★★	★★★★	★★★★	★★★	★★★	★★★	★★★★	★★★★	★★★★	★★★

Bank of America Corp BAC 27 Jun 2025 21:26, 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
★★★	★★★	★★★	★★★	★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★	★★★

Morgan Stanley MS 27 Jun 2025 21:23, 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
★★	★★★	★★★	★★★★	★★★	★★★	★★★	★★★	★★★★	★★★★	★★★	★★★

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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
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Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
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Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
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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, 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.

2. Estimated Fair Value

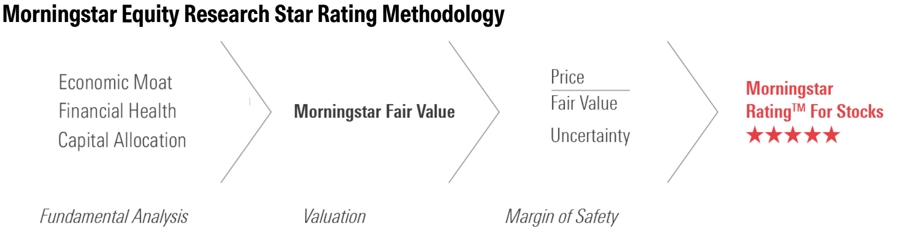
Combining our analysts' financial forecasts with the firm's economic moat helps us assess how long returns on invested capital are likely to exceed the firm's cost of capital. Returns of firms with a wide economic moat rating are assumed to fade to the perpetuity period over a longer period of time than 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 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.

Morningstar Equity Research Star Rating Methodology



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

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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

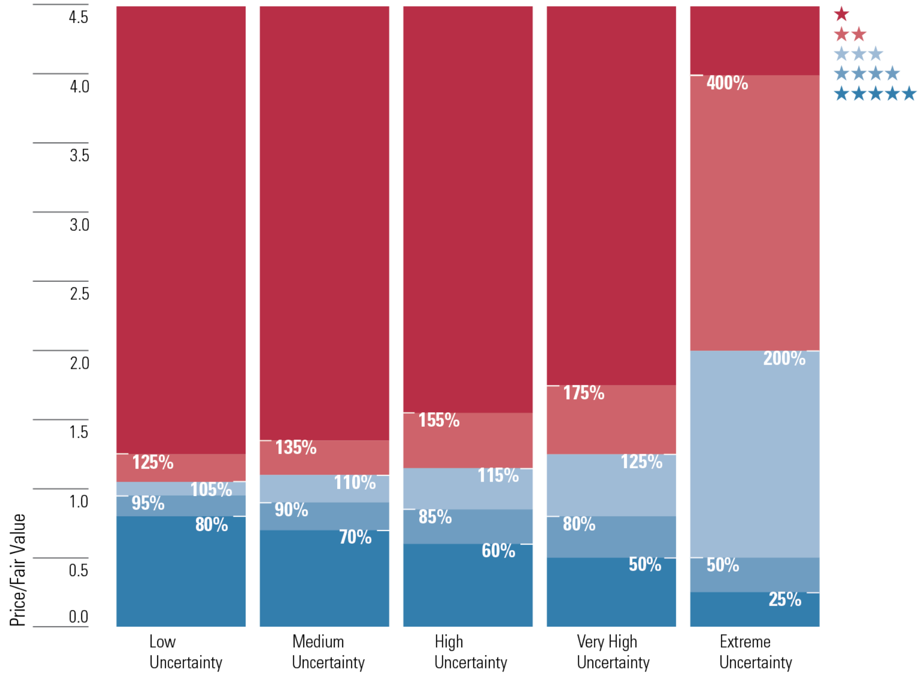
Our uncertainty rating is based on the interquartile range, or the middle 50% of potential outcomes, covering the 25th percentile–75th percentile. This means that when a stock hits 5 stars, we expect there is a 75% chance that the intrinsic value of that stock lies above the current market price. Similarly,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



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 multi-year 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,

Research Methodology for Valuing Companies

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.

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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