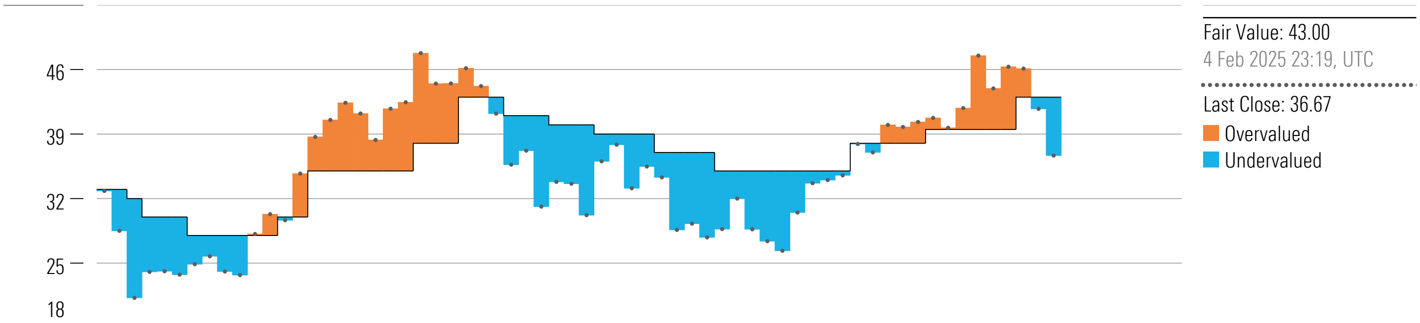
Morningstar Equity Analyst Report | Report as of 15 Apr 2025 15:58, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC.

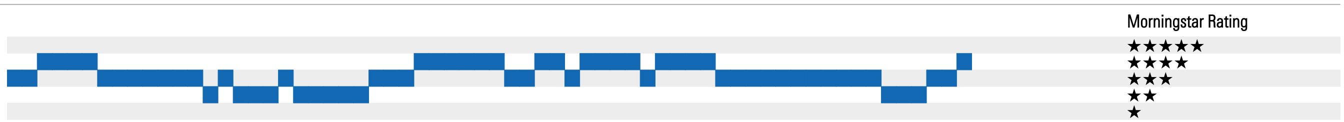
Bank of America Corp BAC ★★★★ 14 Apr 2025 21:33, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
36.67 USD 14 Apr 2025	43.00 USD 4 Feb 2025 23:19, UTC	0.85	290.75 USD Bil 15 Apr 2025	Wide	Large Value	Medium	Standard	2 Apr 2025 05:00, UTC

Price vs. Fair Value



	2020	2021	2022	2023	2024	YTD	
	1.08	1.17	0.85	0.96	1.11	0.85	Price/Fair Value
	-11.90	49.36	-23.62	4.44	33.50	-15.97	Total Return %



Total Return % as of 14 Apr 2025. Last Close as of 14 Apr 2025. Fair Value as of 4 Feb 2025 23:19, UTC.

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

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

Bank of America Earnings: Profitability Boosted by Higher Net Interest Income, Trading Revenue

Analyst Note Suryansh Sharma, Senior Equity Analyst, 15 Apr 2025

Bank of America reported improved profitability in the first quarter, with earnings per share of $0.90 equating to a return on tangible equity of 13.9%. The economy faces considerable turbulence in 2025, primarily due to tariff-related disruptions.

Why it matters: The impacts of tariff-related disruptions didn't show up in the first quarter, but we think they will be more visible in the second quarter. The bank kept its allowance for loan losses as a percentage of loans roughly flat on a sequential basis, at 1.20%.

- First-quarter profitability was powered by solid net interest income, which grew 3% year over year thanks to lower deposit costs, higher markets NII, and fixed-rate asset repricing, partially offset by lower interest rates.
- Fee revenue also did well in the quarter, powered by strong gains in the trading business. Trading should remain strong in the second quarter due to higher volatility.

The bottom line: We plan to maintain our $43 fair value estimate for wide-moat-rated Bank of America after incorporating first-quarter results. We believe that the shares are undervalued. Bank of America is our preferred choice for investors in the money-center space.

- We were skeptical about the rally in US bank stocks after the US presidential election, given the uncertainty around the administration's policies and the healthy valuations in the sector. Bank stocks

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Sector	Industry
Financial Services	Banks - Diversified

Business Description

Bank of America is one of the largest financial institutions in the United States, with more than $3.2 trillion in assets. It is organized into four major segments: consumer banking, global wealth and investment management, global banking, and global markets. Bank of America's consumer-facing lines of business include its network of branches and deposit-gathering operations, retail lending products, credit and debit cards, and small-business services. The company's Merrill Lynch operations provide brokerage and wealth-management services, as does its private bank. Wholesale lines of business include investment banking, corporate and commercial real estate lending, and capital markets operations. Bank of America has operations in several countries but is primarily US-focused.

have declined by more than 20%, and valuations look much more appealing now.

Key stats: Management projects that Bank of America will exit the year with quarterly NII of around $15.6 billion at the midpoint from $14.6 billion currently. NII growth, the operating leverage associated with it, and resultant profit growth are the crux of our thesis for the bank.

Long view: The bank is well positioned for any economic turbulence as its underlying business is inherently more resilient now.

Business Strategy & Outlook Suryansh Sharma, Senior Equity Analyst, 3 Apr 2025

After years of issues following the financial crisis of 2008, Bank of America has emerged as one of the preeminent US banking franchises. The bank has one of the best retail branch networks and overall retail franchises in the United States, is a Tier 1 investment bank, is a top four US credit card issuer, is a top three US acquirer, has a solid commercial banking franchise, and owns the Merrill Lynch franchise, which has turned into one of the leading US brokerage and advisor firms.

We believe that scale and scope advantages are increasingly important as the role of technology in banking grows. The bank is seeing increasing mobile adoption, has access to data on millions of customers, and has one of the largest technology budgets in the banking industry. Given the scalability of these platforms, we believe these factors will only matter more as the industry progresses.

The bank has been investing in organic growth initiatives across its franchises. The bank has opened hundreds of new financial centers across the US over the past several years in an attempt to build its client base across its product offerings. The bank's expenses have crept up quite a bit in the last several years, but we expect expense growth to remain muted in 2025 and project a longer-term compounded annual growth rate of around 2.5%. The bank's ability to keep the expense growth rate in check will be key to improving the bank's efficiency.

Meanwhile, the bank isn't the only one investing for future share gains, so the space remains as competitive as ever, and we don't see Bank of America quite catching up with rival JPMorgan. Even so, with its scaled and integrated retail and commercial offerings, Bank of America remains in an enviable competitive position. During the banking turmoil of 2023, deposit outflows were not a serious issue, and the bank remains solidly profitable, with returns on tangible equity consistently exceeding its cost of equity. While the bank took more duration risk than peers in its securities portfolio, regulatory capital levels and core profitability remain solid. The bank's unique balance sheet dynamic set it up for strong near-term growth in profitability.

Bulls Say Suryansh Sharma, Senior Equity Analyst, 3 Apr 2025

- Bank of America is poised to succeed on a nationwide scale, and there seems to be no structural reason it can't be one of the strongest bank franchises.

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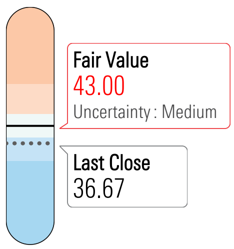
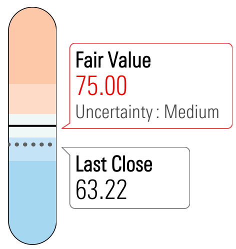
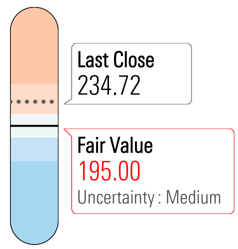
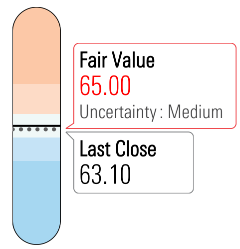
Competitors

	Bank of America Corp BAC	Citigroup Inc C	JPMorgan Chase & Co JPM	Wells Fargo & Co WFC
				
Economic Moat	Wide	None	Wide	Wide
Currency	USD	USD	USD	USD
Fair Value	43.00 4 Feb 2025 23:19, UTC	75.00 5 Feb 2025 00:36, UTC	195.00 24 Jan 2025 21:20, UTC	65.00 28 Jan 2025 19:36, UTC
1-Star Price	58.05	101.25	263.25	87.75
5-Star Price	30.10	52.50	136.50	45.50
Assessment	Undervalued 14 Apr 2025	Undervalued 14 Apr 2025	Overvalued 14 Apr 2025	Fairly Valued 14 Apr 2025
Morningstar Rating	★★★★14 Apr 2025 21:33, UTC	★★★★14 Apr 2025 21:33, UTC	★★14 Apr 2025 21:33, UTC	★★★14 Apr 2025 21:35, UTC
Analyst	Suryansh Sharma, Senior Equity Analyst	Suryansh Sharma, Senior Equity Analyst	Suryansh Sharma, Senior Equity Analyst	Suryansh Sharma, Senior Equity Analyst
Capital Allocation	Standard	Standard	Exemplary	Standard
Price/Fair Value	0.85	0.84	1.20	0.97
Price/Sales	2.86	1.48	3.88	2.63
Price/Book	1.02	0.62	1.97	1.27
Price/Earning	11.42	10.10	12.70	11.35
Dividend Yield	2.78%	3.50%	2.15%	2.46%
Market Cap	278.79 Bil	118.99 Bil	652.31 Bil	205.81 Bil
52-Week Range	33.07—48.08	53.51—84.74	179.20—280.25	50.15—81.50
Investment Style	Large Value	Large Value	Large Value	Large Value

- As a GSIB, Bank of America should not have to worry about deposit flight, and its valuation has become less demanding compared with some of its money-center peers.
- Bank of America is seeing exceptional digital adoption, and there still seems to be something left in the tank for expense savings, potentially helping the bank better absorb inflationary expense pressure.

Bears Say Suryansh Sharma, Senior Equity Analyst, 3 Apr 2025

- If the economy ever falters and rates are cut, watch out for the downside. Further, Bank of America is hamstrung with a longer duration securities portfolio, which will take years to mature away.
- The easy expense cuts for Bank of America are probably over, with incremental expense control measures being more challenging.
- The bank is exposed to various headwinds in the near term. Funding costs are running higher, net interest margins remain under pressure, higher regulatory scrutiny is likely, and a potential economic slowdown may be around the corner.

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Economic Moat Suryansh Sharma, Senior Equity Analyst, 3 Apr 2025

We believe that Bank of America possesses a wide economic moat based on cost advantages and switching costs, which is consistent with our bank moat framework. Bank of America is the second-largest US money-center bank by assets and tends to have leading share and operations in many of the areas it competes. Even after accounting for the bank's higher capital requirements, we have a high degree of confidence that the bank will consistently earn returns that exceed its cost of equity through the cycle. We estimate the midcycle return on tangible equity, or ROTE, of around 14% compared with the cost of equity of around 9.5%.

Industry Dynamics:

Bank of America is arguably the closest rival to JPMorgan in terms of the overall strength of the banking ecosystem and the scope of its product offerings. It is one of the top deposit gatherers in the US and has one of the top retail lending footprints as well as one of the top corporate franchises in the United States. The bank's credit card business, which involves lending at relatively higher rates while leveraging low-cost retail banking deposits, is a very profitable business. Bank of America also has one of the largest online retail brokerages in Merrill Edge and one of the largest advisor forces through Merrill Lynch Wealth Management. The bank is a top five global investment bank, one of the largest US issuers of credit and debit cards, one of the top four US-based merchant acquirers, and a top five fee earner from fixed-income, currencies, and commodities products globally. Bank of America is relatively weaker than JPMorgan in areas like investment banking, credit card issuance, trading, and corporate banking, but the bank arguably has one of the best consumer and small business banking franchises. Given the bank's higher capital levels since the global financial crisis, the increasing importance of scale and scope with changes in technology, and robust fee income, we believe Bank of America will consistently earn returns that exceed its 9.5% cost of equity through the cycle.

The firm's scale advantage in its core banking business can be demonstrated by the sheer size of its balance sheet, which stood at about $3.3 trillion as of the end of 2024, only slightly smaller than that of its closest rival, JPMorgan, which was around $4.0 trillion. The bank's balance sheet is materially larger than other rivals like Wells Fargo, Citi, and other large regional banks. The bank's core strength is its consumer banking division, which has an estimated 60 million clients and a nationwide network of approximately 3,700 branches, 15,000 ATMs, a top debit card business, and, most importantly, a leading digital banking platform. The bank's consumer-facing digital banking platforms have about 48 million active users, including approximately 40 million active mobile users. We have reasons to believe that Bank of America is one of the strongest in terms of consumer engagement on its digital channels.

The strength and importance of the consumer banking segment are inherent in the fact that the segment contributes approximately half of the total deposit base of the bank, and the cost of those deposits is highly advantageous. For context, the cost of deposits in the bank's consumer banking division was just 0.64% as of the fourth quarter of 2024, when the federal-funds rate was at 4.33%. Bank of America's consumer deposits are substantially cheaper than deposits in its global banking and wealth and investment management divisions, which clocked in at 2.97% and 2.75%, respectively, as of the end of the fourth quarter of 2024. Importantly, the consumer banking division supports other business segments—it had about $950 billion in cheap deposits against just $300 billion in loans at the end of 2024. We see Bank of America's consumer banking segment as being central to the company's business model and its prospects.

Across its other business lines, Bank of America earns relatively strong returns in its global wealth and asset management segments, which primarily comprise Merrill Wealth Management and private banking products for high-net-worth individuals. The segment provides a full suite of tailored investment management, brokerage, retirement, and wealth-related products through its network of financial advisors. The business has about $1.9 trillion in AUM as of the end of 2024 and about $4.3 trillion in client assets, which include AUM, brokerage assets, deposits, and loans.

The global banking segment primarily houses commercial banking and investment banking businesses and provides a wide range of lending-related products and services, integrated working capital management, treasury solutions, and underwriting and advisory services. The bank has a reasonably strong commercial banking franchise and is ranked third globally in terms of investment banking revenue, with 6.3% market share in 2024 (Dealogic). Finally, the global markets segment consistently earns the lowest returns for the bank and offers sales, trading services, and research to institutional clients across fixed-income, credit, currency, commodity, and equity businesses.

Investment Banking and Trading:

Investment banking moats for equity and debt underwriting, merger and restructuring advisory, and loan syndication are largely built on intangible assets. These include a firm's reputation, investor relationships, executive connections, industry expertise, research coverage, track record, and distribution strength. A strong intangible asset base increases the likelihood of securing the lead advisor role in deals, which offers higher revenue potential. It also enhances recruitment of top talent. Indicators of these moats include league table rankings, involvement in major deals, and banker revenue generation.

Conversely, institutional securities trading in developed markets shows little evidence of moats. Transparent pricing, high liquidity, and increased electronic trading have tightened profit margins for broker/dealers. Greater opportunities exist in less transparent areas like bespoke derivatives or block trades, though they carry higher risks. For instance, if a bank buys a large block of shares, it may have to keep it on its balance sheet for a period of time and may face potential losses if the share value declines before finding buyers. High revenue and margins in institutional trading don't guarantee excess returns on capital. While top banks like Bank of America may earn slightly higher returns (and margins) than smaller firms, the business remains volatile, with returns barely exceeding the cost of capital. Broker/dealers must hold financial instruments on their balance sheet, like fixed-income securities, which require costly capital. Stricter regulations have further increased capital requirements for the business, limiting profitability. As a result, even high margins in trading don't necessarily indicate a strong economic moat. While portions of Bank of America's investment banking businesses benefit from intangible assets, we do not award intangible asset moat source to money-center banks on a companywide basis, given limited segment contribution to consolidated profit.

Wealth Management:

Bank of America provides products related to asset management, wealth management, and private banking in its global wealth and asset management segment. Bank of America's wealth management business benefits from both client asset stickiness and advisor switching costs. On the one hand, clients are often hesitant to switch advisors because of existing relationships with their current advisor, uncertainty about the potential cost-benefit trade-off of a switch, and inertia with financial management decision-making. On the other hand, we believe advisors tend to stay with their current firm due to the threat of losing client assets if they switch. A 2021 study by Cerulli suggests that advisors can lose as much as 19% of client assets if they switch firms. We believe that the moats within the wealth management business are generally stronger than within a typical asset management business.

Retail and Commercial Banking:

We believe bank moats are derived primarily from two sources: cost advantages and switching costs. We see cost advantages as stemming from three primary factors: a low cost deposit base, excellent operating efficiency, and conservative underwriting. Regulatory costs must also be considered.

We think that the bank's biggest competitive advantage is its high-quality deposit franchise, especially in the retail banking business. Bank of America's overall deposit market share is attractive, with one of the highest weighted average market shares among our coverage. Bank of America is the top depositee in five of its seven largest metropolitan statistical areas and is one of the top deposit gatherers across the US. The bank has been slightly outperforming the market and has been gaining deposit share over the past five years. Total deposit balances grew by around 32% for the entire US banking system from 2019 to 2024, while the balances for Bank of America grew by around 41% during the same period. Bank of America's cost of interest-bearing deposits has consistently been lower than the industry average, thereby indicating an advantaged deposit franchise. On a cost-advantage basis, we view the bank's deposit base as likely to remain advantageous in the future, as well.

Bank of America's operating efficiency has generally been worse than peers since the crisis, but this is largely due to the outsize fines the bank has received as well as its unique integration challenges following the crisis. The bank had made several large acquisitions before and during the crisis, and the demands of the crisis led to a prolonged process of full integration as well as trying to rightsize businesses. The bank also had to deal with more crisis-related fines than any of the Big Four. In addition to this, the bank's efficiency ratio after the pandemic has been negatively impacted by imprudent balance sheet positioning, which led to lower NIMs compared with its peers. We believe that the bank's structural NIM profile is materially better than its performance in the past three years.

In recent years, the bank has consolidated over 30% of branches, reduced headcount by over 30%, and sold off noncore assets. We now believe Bank of America will, at the very least, be able to match its US banking peers on operating efficiency. In addition to this, we also highlight that Bank of America has a much higher exposure to certain business lines, such as wealth management, investment banking, and home lending, that typically have much higher efficiency ratios than traditional retail banking. These segments weigh on the efficiency ratio of the consolidated bank due to the structural characteristics of these businesses, which have lower margins but are relatively capital light. For context, the bank's consumer banking and global banking segments reported an average efficiency ratio of 52% and 48%, respectively. However, its wealth management and its global markets segments reported much higher efficiency ratios of 75% and 67%, respectively. The bank's consolidated efficiency ratio is negatively impacted by its structural business mix, but the efficiency ratio of the bank's core retail and commercial banking functions is topnotch.

Given the new phase of banking, where technological changes are occurring faster and are more impactfully than ever before and can be deployed across singular, integrated platforms, we see potential advantages for the largest banks when it comes to operating efficiency. With its tech budget of roughly $10 billion per year, Bank of America may not drop to the lowest overall efficiency ratio among peers, but it will be able to maintain higher levels of investment at similar efficiency levels. We project the efficiency ratio (defined as operating expenses/revenue) of the bank to improve to high-50s in the terminal year of our forecast, compared with the mid-60s in recent years. The inherent cost advantage of the bank will be much more visible after the bank's balance sheet has been repositioned and NIMs improve. Further, with its solid mix of fee income, Bank of America is much better insulated in low-rate environments.

Bank of America was hit quite hard during the global financial crisis and underperformed its peers, so it has not historically had any credit advantage in the last several decades. However, many of the charges were related to poor acquisitions as well as credit practices and loan concentrations, which have changed since the crisis. Bank of America made the ill-timed acquisition of MBNA in 2006 and followed this with the acquisition of Countrywide in 2008. This gave it one of the largest exposures to unsecured consumer lending and well as subprime mortgages. This, along with all the legal charges that followed, plagued the bank following the crisis. Bank of America has tamed its high consumer exposures, steered away from subprime lending, reduced second mortgage exposures, and run off or sold portions of its past portfolios. It has now rebalanced its loan portfolio, and FICO scores and other credit-risk-related metrics are much improved compared with precrisis vintages. The bank has also reduced its exposure to the credit card business. We also believe CEO Brian Moynihan's renewed focus on, in his words, "responsible growth," should set the tone from the top when it comes to chasing outsize loan growth in more-risky areas.

Bank of America's credit costs (net charge-offs as a percent of loans) have been slightly higher than the US banking industry during the global financial crisis and in several years following it. However, the bank's performance has improved drastically in recent years, and it is now outperforming the industry. We think that the deep scars of global financial crisis have changed the underwriting culture of the bank and the bank's loan portfolio is much better positioned for a down cycle. The bank has been investing aggressively in data analytics and tech to improve its underwriting, and we think that the bank should continue to maintain an advantage in underwriting loans.

While banks primarily earn moats because of their cost advantages, the competitive positioning of a bank can be reinforced by the ability of a particular bank to retain the advantages through switching costs. We see switching costs as more of a supporting moat source for banks rather than a primary moat source. Banks with deep customer relationships spanning multiple products can generate higher-than-average switching costs. The higher the number of products that a particular customer uses from a bank, the higher the associated switching costs.

Customers tend to keep their money in the same bank despite changes in interest rates, economic conditions, or the availability of similar higher-yield products offered by competing banks. This can largely be attributed to the financial, time, and psychological barriers that make it difficult or inconvenient for customers to move their deposits from one bank to another. Switching banks is often not just about transferring money from one account to another; it can also involve changing direct deposit, credit card linkages, automatic bill payments, and so on. The time, inconvenience, and friction associated with changing banks are similar for businesses as for retail customers. In addition to this, the financial rewards associated with changing banks are often very limited. For example, the rates paid on certificates of deposit are comparable among money-center banks, and to earn materially higher rates, the customer might have to move to a regional bank, community bank, or a FinTech that does not have comparable product offerings and may involve higher risk. This stickiness in deposits is an inherent characteristic of the banking business and arises from factors like convenience, trust, switching costs, and the perceived safety of bank deposits. The inherent switching costs in bank deposits can be seen in the fact that deposit market share doesn't change much among different banks during a typical year. The difficulty in moving bank accounts is also exemplified by the fact that it is now common practice for US banks to offer hundreds of dollars or highly attractive rates to attract new customers.

We consider switching costs as a secondary moat source despite it being an inherent feature of bank deposits because all banks benefit from it. Having said this, we argue that certain types of deposits are stickier than others. We think that retail deposits are stickier than yield-sensitive institutional deposits, that a more granular deposit base is stickier than a lumpier deposit base, that checking accounts or working capital-related accounts are stickier than savings or investment-based accounts, and that noninterest-bearing deposits are stickier than interest-bearing deposits. Given the fact that the type of deposits with higher switching costs are generally cheaper, we argue that deposit costs for banks are the strongest indicator of relative switching cost advantage. This is the reason that both the cost advantage moat source and switching cost moat source for banks are joined at the hip, and we tend to rely more on cost advantage given the availability of quantitative metrics to support moat arguments.

Scale and Scope:

Rounding out our moat discussion, we believe that Bank of America's key advantage comes from its scale in certain fixed-cost, fixed-platform businesses, as well as the breadth of products it can offer to clients. This contributes to economies of scale and economies of scope and creates switching costs for customers as they use the bank for more and more products. The bank is one of the top issuers of credit and debit cards, where many of the costs of running a payment platform are fixed and high in nature, leading to the need for scale. This has been borne out in the industry where much consolidation and concentration within the top performers has occurred. The same has occurred in the mortgage industry and is occurring for other consumer-based mass-market products. Bank of America also has one of the largest fixed-income, currency, and commodities trading platforms, where incremental returns from the additional volume are maximal as the bank can spread the fixed costs of trading operations over an enormous base of transactions, which helps it compete effectively in a very competitive space.

While all these segments are strong on their own, we believe there are advantages to combining them all under one banking roof. On the consumer side, Bank of America can cross-sell multiple products, providing advantaged pricing to key customer segments (such as through its Preferred Rewards banking program), and spread the overall costs of customer acquisition across more revenue streams. On the commercial side, similar dynamics apply; the bank can offer a complete package with a global scale that few can compete with while sending out armies of bankers to both existing and new markets in an effort to win new business. For a business where switching costs are important, having the product depth and reach that makes it more likely for new customers to try your services first also plays a key role. A bigger scale, powerful distribution networks, a multitude of products, and diversification of business lines lead to economies of scope in addition to the economies of scale already achieved by the bank.

The rapid advancement of digitization, artificial intelligence, and automation is reshaping banking, reducing reliance on physical branches, and enhancing efficiency. Large banks, like Bank of America, are leveraging economies of scale and scope to invest heavily in technology, widening the gap between them and smaller banks. While FinTechs excel in niche areas, they face high regulatory and competitive barriers, limiting their ability to disrupt the industry. Bank of America, with its vast technology budget and a massive workforce in tech roles, is well positioned to capitalize on this shift. Its ability to scale technology and harness extensive customer data strengthens its competitive edge, reinforcing the idea that scale, scope, and tech investment are crucial in modern banking. Having the ability to offer a complete suite of products to both retail and institutional clients under a single roof, increasingly on a unified, well-integrated digital platform, is one of the strongest competitive characteristics of Bank of America and one that would be most difficult to replicate for its rivals.

Conclusion:

We believe the US banking system has improved over the last decade, as capital levels supporting it are at all-time highs. Further, regulation has become considerably stronger in the past several years. The US banking market is quite fragmented, and Bank of America must compete with a variety of regional and community banks as well as large money-center institutions, although this fragmentation has gradually decreased since the 1990s. While we do view the banking sector as intensely competitive, the largest banks by asset size have generally been able to earn higher returns on equity for the last several decades and still do so currently. Our long-term outlook is generally positive from a macroeconomic and political standpoint for the US banking system, as the US is still the world's leading democracy, has increased its GDP at a steady pace for years, and maintains the world's reserve currency, all of which contribute to banking stability. US money-center banks are more geographically diversified than the majority of US regional banks, which often have concentrations in individual states or local economies. This diversification is positive from a risk perspective.

Bank of America is large enough to be considered a global systemically important bank and has a GSIB surcharge of 3%. The bank is also large enough to be subject to the Federal Reserve's annual stress tests, as well as a host of other regulatory requirements, and we don’t see any massive regulatory relief coming for the large money-center banks. The stringent capital requirements that the largest banks are held to give us some reassurance that these banks will be able to weather the next economic downturn. We use return on tangible equity to determine whether a bank has shown or is forecast to have the characteristics of an economic moat. After making certain adjustments, we calculate that Bank of America has earned an average ROTE of about 12.5% in the past 10 years, which is significantly above our 9.5% cost of equity for the bank. We project that the bank should be able to earn a ROTE of around 14% in our midcycle forecast year, given its improved scale and competitive positioning in recent years. In the case of Bank of America, we clearly have both quantitative and qualitative evidence of an economic moat and are confident about the bank’s ability to maintain durable excess returns, underpinning our wide moat rating.

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Fair Value and Profit Drivers Suryansh Sharma, Senior Equity Analyst, 3 Apr 2025

After incorporating the latest quarterly results, we are increasing the fair value estimate of Bank of America to $43.00 per share from $39.50 per share. Our fair value estimate is 1.60 times reported tangible book value per share as of December 2024.

The bank had been one of the more rate-sensitive banks under our coverage, but that asset sensitivity changed after the pandemic as the bank took more duration risk. With interest rates having peaked, the focus is now on the bank's performance as interest rates are cut. Given the bank's outsize exposure to long-duration securities and mortgages, we believe that the bank's net interest income will hold up relatively better than its peers. We project NII to grow by around 6.8% in 2025 followed by another few years of strong growth as NIMs expand and balance sheet growth resumes. The key to Bank of America outperforming in the future would likely be the market getting more comfortable with where NII will reach its equilibrium, and also seeing the securities book lower its duration over time.

We think that fee income for the bank should remain strong. We see some pressure remaining on mortgages as rates remain high for much of the year, but investment banking revenue should hold up quite well given the improved external environment for the business. Trading-related fees have been exceptionally strong in the past couple of years, and we expect trading-related revenue to remain strong in the near term before it starts normalizing lower. Overall, we project a 2.4% noninterest revenue compounded annual growth rate in the next 10 years from the current elevated levels.

We expect credit costs to remain stable in 2025 after credit-related charge-offs picked up in 2024 following strong performance in the past three years. Overall, we think that charge-offs will increase in the upcoming years, but they should remain manageable. Eventually, we forecast net charge-offs averaging 0.62% of loans, higher than the past few years but much better than in the past cycle. Having said this, credit quality will continue to be a major source of uncertainty for the banking sector.

Expenses have been another point of interest with Bank of America. Expenses rose at an elevated rate in postpandemic years. We think expense growth should remain much more controlled in 2025, as we expect around 2.5% growth in expenses after adjusting for nonrecurring charges. We project a 2.5% expense compounded annual growth rate in the next 10 years for the bank. This leads to roughly a 59% efficiency ratio over time, although it takes years. One of the keys for Bank of America to outperform in the future would likely be an ability to show scale efficiencies translating into a better return profile.

We use a 9.5% cost of equity. We project returns on tangible common equity will be roughly 14% through the cycle for the bank.

Risk and Uncertainty Suryansh Sharma, Senior Equity Analyst, 3 Apr 2025

An investment in Bank of America entails a large amount of regulatory and macroeconomic risk. For Bank of America, costs of compliance are high, it is large and complex, and it is clearly a prime target of regulators seeking fines and litigants seeking compensation for alleged misdeeds. From a macroeconomic perspective, the bank's profitability will be affected by the interest-rate cycles and the effects of credit and debt cycles, all of which are outside management's control. Most lines of business at Bank of America are economically sensitive.

Another risk is business disruption. The banking industry is arguably going through more technological change than ever before. Bank branches are declining in importance as more transactions take place digitally, and it is still uncertain how this dynamic will ultimately play out. Though scale and regulatory expertise create barriers to entry, new or existing competitors could take share as the banking industry digitizes and becomes more and more a technology-focused industry.

We don't consider any environmental, social, or governance issues to be material enough to affect our uncertainty rating or fair value estimate. The money-center banks deal with all of the inherent issues of operating in a highly regulated business, and there is an inherent cost to this via litigation, investments in internal controls, and more. There have been times when poor governance did lead to material value destruction, but we see the risks of a repeat of something like the financial crisis as minimal today.

We assign Bank of America a Medium Morningstar Uncertainty Rating.

Capital Allocation Suryansh Sharma, Senior Equity Analyst, 3 Apr 2025

We give Bank of America a Standard Capital Allocation Rating. In our opinion, the company's balance sheet is sound, its capital investment decisions are standard, and its capital return strategy is appropriate. We view management's targeted common equity Tier 1 ratio of approximately 11.9% as appropriate. We view the bank's capital investments as standard. The bank was at the center of poor investments and capital destruction during the financial crisis of 2008, but we think capital allocation has improved materially since then. The bank has downsized, derisked, cut expenses, and invested capital in much more positive endeavors, such as organic growth and efficiency efforts. Over the past decade-plus, Bank of America's turnaround has positioned it as arguably one of the dominant US banking franchises. We assess the company's capital return strategy as appropriate. Bank of America, like most banks, targets a rough payout ratio for dividends and then uses capital first and foremost to invest in the business. Any extra capital beyond these requirements can be used for share repurchases.

Investors may never regard CEO Brian Moynihan with the reverence bestowed upon certain peers, but he should be given credit for returning the bank to form since taking over the imperiled institution at the height of its troubles. His tenure has not been perfect; initial underestimates of mortgage-related claims, a handful of regulatory missteps, mispositioning of the bank's balance sheet in the current interest-rate cycle, and some questionable operational decisions (such as certain extra fees) stand out. However, his overall record has been decidedly positive, with shareholders reaping the rewards over the past several years.

With Bank of America successfully navigating the initial blows of the pandemic-driven recession, its success in improving the quality of its balance sheet has been on full display. We think Bank of America is now a much better business, and Moynihan and the management team should get credit for this. Returns on tangible common equity are now beginning to reach best-in-class levels among the money centers, although we aren't sure they will ever fully catch the bank's bigger peer JPMorgan. The bank maintains an enviable deposit base, a broad range of revenue-generating lines of business, and much-improved underwriting standards.

Overall, Moynihan and his management team have nursed Bank of America back to health, and the bank has turned into a best-in-class franchise. If there were one criticism recently, it would be the bank's duration risk management. Bank of America has a larger portion of its balance sheet stuck in lower-yielding securities than that of many peers, which will be an earnings headwind for now. It does not look great when comparing the unrealized losses with tangible equity. While the unrealized losses do not affect regulatory capital ratios, and we see nothing like what happened with more aggressive peers, it would have been helpful today to take a little less duration risk back in 2020 and 2021.

Analyst Notes Archive

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.

Bank of America Earnings: 2025 Outlook Confirms That Our Net Interest Income Thesis Is Playing Out

Suryansh Sharma,Senior Equity Analyst,16 Jan 2025

Bank of America ended 2024 with decent numbers, including fourth-quarter earnings per share of $0.82, equating to a 12.6% annualized return on tangible common equity. 2025 guidance was mixed, as net interest income is expected to expand considerably but expense growth is on the higher side.Why it matters: The bank's results were boosted by a net interest income beat in the quarter and decent fee momentum across asset management and investment banking. Upbeat NII guidance for 2025 was the biggest highlight for the quarter. NII expanded 2.8% on a sequential basis on the back of deposit favorability, higher loan balances, and fixed-rate asset repricing. Management expects NII to grow to $15.5 billion-$15.7 billion by the fourth quarter of 2025, implying a growth rate of 8.7% compared with the current level. 2025 expenses are expected to be 2%-3% higher than in 2024. The midpoint of expense guidance is slightly higher than our 1.9% projection. 2025 charge-offs are expected to be 50-60 basis points as management expects the economy to remain strong.The bottom line: We plan to maintain our $39.50 fair value estimate for wide-moat-rated Bank of America after incorporating fourth-quarter results. 2025 NII guidance was encouraging, and we expect returns for the bank to improve in the coming years, but management should probably consider tightening its belt when it comes to spending plans. The bank's fundamental performance and earnings growth trajectory should be better than peers' in 2025.Long view: We have continuously highlighted that the Bank of America is underearning its true NII potential because of unique balance sheet dynamics. Management's 2025 guidance has confirmed our thesis on net interest margin expansion. NIM expansion and NII growth could lead to a material improvement in the bank's profitability in the medium term. Profitability could surprise on the upside in 2026.

US Banks Election Impact: Tailwinds From Softer Regulation, More M&A, and Steepening Yield Curve

Maoyuan Chen,Equity Analyst,15 Nov 2024

We think that the election of Donald Trump and Republican control of both the Senate and the House bring mostly tailwinds to the US banking industry. We will adjust our valuation models as the incoming government's policies solidify, but with a rally of over 10% for many US banks after the Nov. 5 election results, we believe potential tailwinds have largely been incorporated into share prices and view the banking sector as fairly valued to slightly overvalued.We expect less pressure from bank capital regulation, benefiting mainly the big banks. The 2023 Basel III Endgame proposal originally had about a 19% increase in capital for the biggest banks. However, Bloomberg reported in September 2024 that the revised proposal would only increase capital requirement by 9% for the US global systemically important banks. While it will take some time for the final capital regulation to come out, we think the eventual revision for bank capital regulation will end up on the lighter side. This will allow banks to grow their balance sheets more, have higher profitability, and give back more excess capital to shareholders, all else equal.The Republican Party's more friendly stance toward mergers and acquisitions also means the banking industry can see more consolidation, benefiting the regional banks. Through acquisitions, regional banks can enter into new markets, gain new product capabilities, and get more efficient through cost savings. We also think scale is going to be increasingly important as technology rapidly changes.A likely steepening yield curve should add to banks' net interest income. The Federal Reserve is cutting rates on the short end and the 10-year US Treasury yield is picking up after the election as the market is pricing in likely higher inflation in the long term. Because banks lend long and borrow short, an upward-sloping yield curve is better for bank earnings than a flat or inverted yield curve.

Bank of America Earnings: Strong Fee Revenue and Upbeat Commentary Mark a Solid Quarter

Suryansh Sharma,Senior Equity Analyst,15 Oct 2024

Wide-moat-rated Bank of America reported a solid set of numbers in the third quarter as investment banking continues to recover, asset valuations remain buoyant, trading revenue remains strong, and, most importantly, the macroeconomic consensus on a soft landing has strengthened the outlook for the next year. The bank reported earnings per share of $0.81 in the third quarter, lower than the $0.90 per share in the same quarter of the previous year. The third-quarter numbers resulted in a return on tangible equity of 12.8%. We are maintaining our $39.50 per share fair value estimate for Bank of America as we fully incorporate the third-quarter results.Net interest income will continue to be an important area to watch for Bank of America as interest rates decline in upcoming quarters. Bank of America’s relatively lower asset sensitivity should enable it to outperform other banks from an NII perspective when rates decline. NII improved sequentially by about $0.3 billion during the quarter, driven by fixed-rate asset repricing and better results in the global markets segment. Management said that the bank's NII has already bottomed out at $13.9 billion in the second quarter and it expects an NII of around $14.3 billion in the fourth quarter. The bank reported a third-quarter net interest margin of 1.92%, which is materially lower than our midcycle estimates of 2.30% due to the unique balance sheet dynamics impacting the bank.The bank reported an efficiency ratio of 65% in the third quarter as expenses increased by about 4% on a year-over-year basis, driven by revenue-related expenses and higher investments in technology. We think that Bank of America has considerable scope to improve its efficiency. For context, the bank's larger peer JPMorgan is now operating at an efficiency ratio of around 53%, resulting in a massive difference of 12 percentage points.

Bank of America Earnings: Encouraging NII Guidance and Expense Control Should Boost Profitability

Suryansh Sharma,Senior Equity Analyst,16 Jul 2024

Wide-moat-rated Bank of America reported a good set of second-quarter numbers. Earnings per share came in at $0.83, slightly lower than the $0.88 in the year-ago quarter. For us, the biggest highlight was the company's encouraging net interest income outlook for the remaining half of the year. Management expects NII to increase from $13.9 billion in the current quarter to around $14.5 billion by the fourth quarter. The shares have rallied around 5% since the announcement of the results July 16.Profitability in the second half should also be boosted by expense control and relatively strong fee income in the asset-management, investment banking, and trading businesses. The second-quarter numbers resulted in a return on tangible equity of 13.6%. We plan to increase our $38 fair value estimate by a mid-single-digit percentage as we fully incorporate these results. The increase can mostly be attributed to the time value of money and slightly higher NII in the near term than we previously anticipated.The shares had corrected by around 50% in late 2023 from their highs in early 2022 partly due to fears about the bank’s profitability and higher exposure to long-duration securities. Among other things, investors have been penalizing Bank of America for its longer-duration securities exposure when interest rates were rising. The longer-duration securities portfolio weighed on NII, as these assets were stuck on the books while earning lower yields. We have continuously highlighted that the bank's balance sheet position will temporarily weigh on earnings, but the long-term earnings capacity of this high-quality banking franchise is fully intact. The shares have rallied by around 75% from their lows in late 2023.

US Banks: Duration Exposure and Balance Sheet Positioning Will Affect NIMs and Profits in Future

Suryansh Sharma,Senior Equity Analyst,19 May 2024

JPMorgan has become an investor favorite in recent quarters because of its bumper profitability. In contrast, its peer, Bank of America, has fallen out of grace as its profitability remains uninspiring on a relative basis. We believe the recent divergence between these two banks is not because of a structural difference in their banking franchise performance. It is largely a function of how their balance sheets were managed during the liquidity boom following the pandemic. JPMorgan placed most excess deposits in short-duration assets, whereas Bank of America took on excessive duration risk by buying long-duration securities. This made JPMorgan much more asset-sensitive than Bank of America as we entered the interest-rate hiking cycle in 2022.Balance sheet positioning and duration exposure can have profound implications for bank returns and profitability, especially during rapid interest-rate changes. JPMorgan benefited enormously from its asset sensitivity as interest rates rose, but rising rates hurt Bank of America. Markets often tend to extrapolate the recent past, and we reckon this is what seems to be happening with these two firms. We make the case that the relative performance of these banks is positioned to reverse as interest rates start to decline.

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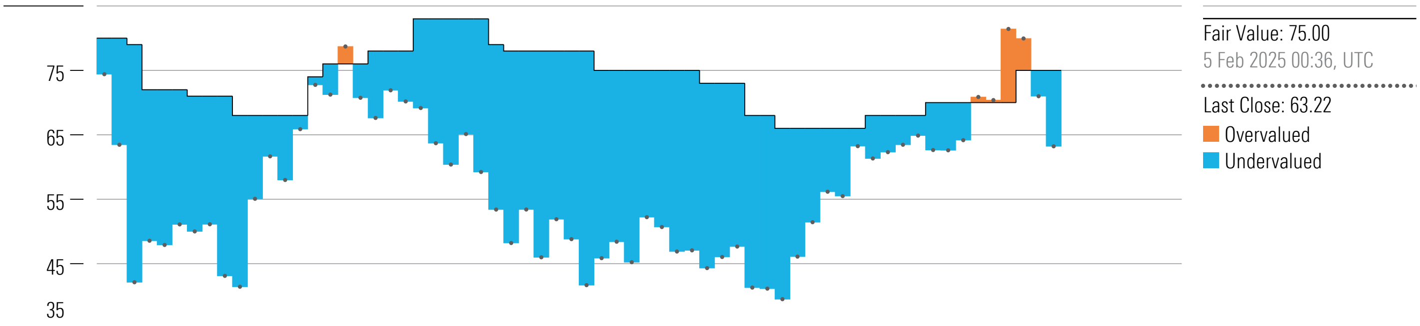
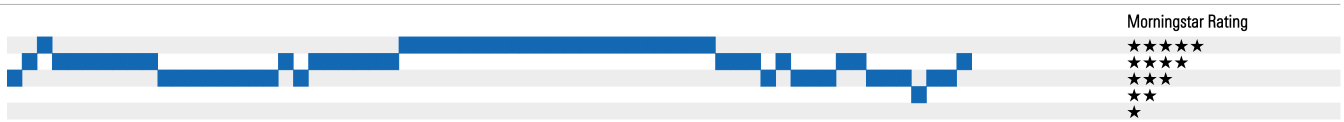
Bank of America Corp BAC ★★★★ 14 Apr 2025 21:33, UTC

Competitors Price vs. Fair Value

Citigroup Inc C

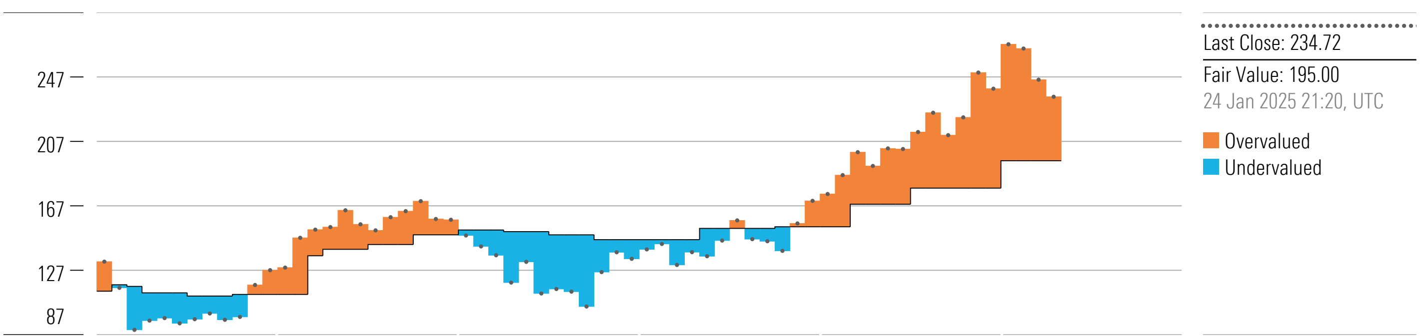


	2020	2021	2022	2023	2024	YTD	
	0.91	0.73	0.60	0.78	1.01	0.84	Price/Fair Value
	-20.27	1.25	-21.73	18.33	41.08	-9.39	Total Return %

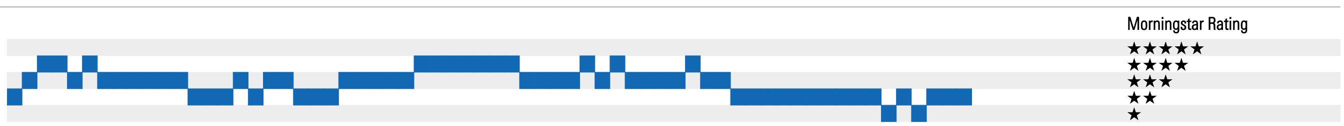


Total Return % as of 14 Apr 2025. Last Close as of 14 Apr 2025. Fair Value as of 5 Feb 2025 00:36, UTC.

JPMorgan Chase & Co JPM



	2020	2021	2022	2023	2024	YTD	
	1.13	1.06	0.92	1.10	1.35	1.20	Price/Fair Value
	-6.26	27.53	-12.79	29.87	43.63	-0.98	Total Return %



Total Return % as of 14 Apr 2025. Last Close as of 14 Apr 2025. Fair Value as of 24 Jan 2025 21:20, UTC.

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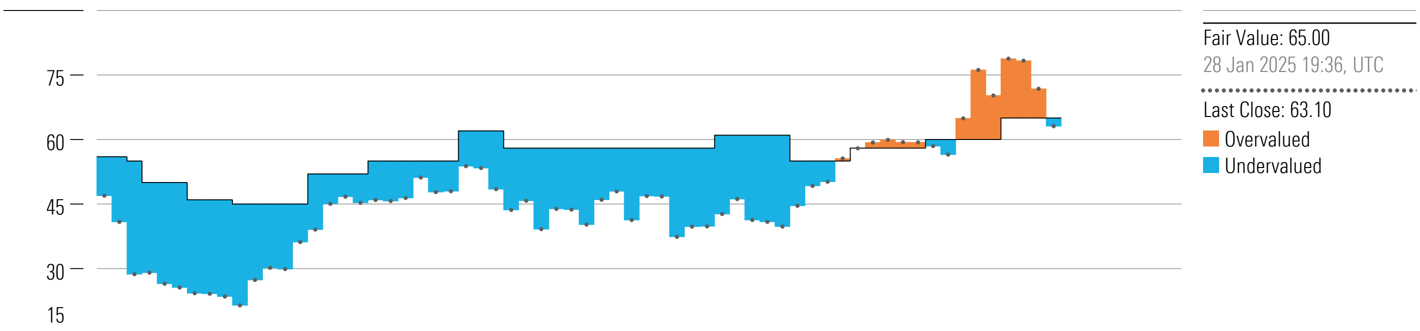
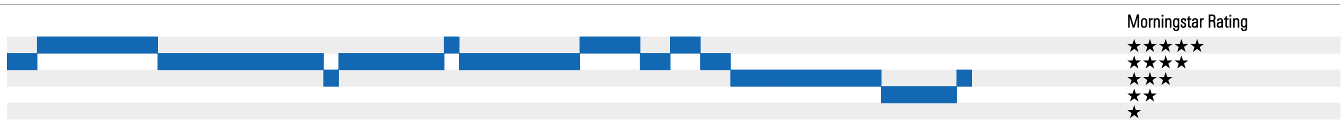
Competitors Price vs. Fair Value

Wells Fargo & Co WFC



	2020	2021	2022	2023	2024	YTD	
	0.67	0.87	0.71	0.89	1.17	0.97	Price/Fair Value
	-41.64	60.97	-11.65	22.35	45.75	-9.60	Total Return %



Total Return % as of 14 Apr 2025. Last Close as of 14 Apr 2025. Fair Value as of 28 Jan 2025 19:36, UTC.

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Bank of America Corp BAC ★★★★ 14 Apr 2025 21:33, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
36.67 USD 14 Apr 2025	43.00 USD 4 Feb 2025 23:19, UTC	0.85	290.75 USD Bil 15 Apr 2025	Wide	Large Value	Medium	Standard	2 Apr 2025 05:00, UTC

Morningstar Valuation Model Summary

Financials as of 04 Feb 2025	Actual			Forecast				
Fiscal Year, ends 31 Dec	2022	2023	2024	2025	2026	2027	2028	2029
Net Interest Income (USD Mil)	52,462	56,931	56,060	60,521	63,053	66,606	68,931	72,291
Non Interest Income (USD Mil)	42,488	41,650	45,827	45,943	46,499	47,898	49,240	50,623
Total Pre-Provision Revenue (USD Mil)	94,950	98,581	101,887	106,464	109,552	114,505	118,171	122,914
Provision for Loan Losses (USD Mil)	2,543	4,394	5,821	6,830	7,147	7,986	8,458	8,698
Operating Expenses (USD Mil)	61,438	65,845	66,812	68,464	70,160	71,957	73,793	75,677
Operating Income (USD Mil)	30,969	28,342	29,254	31,170	32,245	34,561	35,920	38,539
Net Income Available to Common Stockholders (USD Mil)	27,528	26,515	27,132	27,741	28,537	30,068	30,891	33,047
Adjusted Net Income (USD Mil)	26,015	24,866	25,503	26,383	27,151	28,655	29,449	31,577
Weighted Average Diluted Shares Outstanding (Mil)	8,168	8,081	7,936	7,751	7,507	7,298	7,098	6,941
Earnings Per Share (Diluted) (USD)	3.19	3.08	3.21	3.40	3.62	3.93	4.15	4.55
Adjusted Earnings Per Share (Diluted) (USD)	3.19	3.08	3.21	3.40	3.62	3.93	4.15	4.55
Dividends Per Share (USD)	0.86	0.92	1.00	1.19	1.27	1.37	1.45	1.59

Margins & Returns as of 04 Feb 2025		Actual			Forecast					
	3 Year Avg	2022	2023	2024	2025	2026	2027	2028	2029	5 Year Avg
Net Interest Margin %	2.0	1.9	2.1	2.0	2.1	2.1	2.2	2.2	2.3	2.2
Efficiency Ratio %	65.7	64.7	66.8	65.6	64.3	64.0	62.8	62.5	61.6	63.0
Provision as % of Loans	0.4	0.2	0.4	0.5	0.6	0.6	0.7	0.7	0.7	0.7

Growth & Ratios as of 04 Feb 2025		Actual			Forecast					
	3 Year Avg	2022	2023	2024	2025	2026	2027	2028	2029	5 Year Avg
Net Interest Income Growth %	9.3	22.2	8.5	-1.5	8.0	4.2	5.6	3.5	4.9	5.2
Non Interest Income Growth %	-0.3	-8.0	-2.0	10.0	0.3	1.2	3.0	2.8	2.8	2.0
Total Pre-Provision Revenue Growth %	—	6.6	3.8	3.4	4.5	2.9	4.5	3.2	4.0	—
Operating Expenses Growth %	—	2.9	7.2	1.5	2.5	2.5	2.6	2.6	2.6	—
Operating Income Growth %	—	-8.9	-8.5	3.2	6.6	3.5	7.2	3.9	7.3	—
Net Income Growth %	-5.9	-13.9	-3.7	2.3	2.3	2.9	5.4	2.7	7.0	—
Earnings Per Share Growth %	-3.5	-10.8	-3.4	4.4	5.9	6.3	8.6	5.7	9.7	7.2

Valuation as of 04 Feb 2025	Actual			Forecast				
	2022	2023	2024	2025	2026	2027	2028	2029
Price/Earning	10.4	10.9	13.7	10.8	10.1	9.3	8.8	8.1
Price/Book	—	—	—	—	—	—	—	—
Price/Tangible Book	1.5	1.4	1.7	1.3	1.3	1.2	1.1	1.0
Dividend Yield %	2.7	2.3	2.8	3.2	3.5	3.7	4.0	4.3
Dividend Payout %	27.0	29.9	31.1	35.0	35.0	35.0	35.0	35.0

Operating Performance / Profitability as of 04 Feb 2025	Actual			Forecast				
Fiscal Year, ends 31 Dec	2022	2023	2024	2025	2026	2027	2028	2029
ROA %	0.9	0.9	0.8	0.8	0.9	0.9	0.9	0.9
ROE %	10.1	9.4	9.2	9.3	9.3	9.6	9.6	10.0
Return on Tangible Equity %	14.8	13.4	12.8	12.7	12.7	13.0	12.9	13.3

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Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
36.67 USD 14 Apr 2025	43.00 USD 4 Feb 2025 23:19, UTC	0.85	290.75 USD Bil 15 Apr 2025	Wide	Large Value	Medium	Standard	2 Apr 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 %	9.0	9.2	9.1	9.2	9.2	9.2	—	9.2

Forecast Revisions as of	2025		2026		2027	
Prior data as of	**Current**	**Prior**	**Current**	**Prior**	**Current**	**Prior**
Fair Value Estimate Change (Trading Currency)	43.00	—	—	—	—	—
Net Interest Income (USD Mil)	60,521	56,026	63,053	58,950	66,606	62,773
Total Pre-Provision Revenue (USD Mil)	106,464	101,097	109,552	102,443	114,505	107,124
Operating Income (USD Mil)	31,170	28,984	32,245	28,525	34,561	31,215
Net Income (USD Mil)	—	—	—	—	—	—
Earnings Per Share (Diluted) (USD)	3.40	3.15	3.62	3.19	3.93	3.62
Adjusted Earnings Per Share (Diluted) (USD)	3.40	3.15	3.62	3.19	3.93	3.62
Dividends Per Share (USD)	1.19	1.07	1.27	1.12	1.37	1.27

Key Valuation Drivers as of 04 Feb 2025

Cost of Equity %	9.0
Stage II Net Income Growth Rate %	3.0
Stage II Incremental ROIC %	10.7
Perpetuity Year	20

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

Discounted Cash Flow Valuation as of 04 Feb 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	**317,518**
Projected Diluted Shares	7,434
Fair Value per Share (USD)	**43.00**

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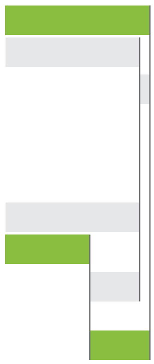
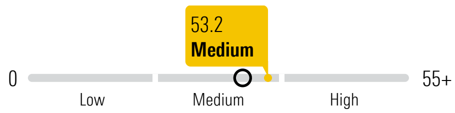
36.67 USD 14 Apr 2025	43.00 USD 4 Feb 2025 23:19, UTC	0.85	290.75 USD Bil 15 Apr 2025	Wide	Large Value	Medium	Standard	2 Apr 2025 05:00, UTC

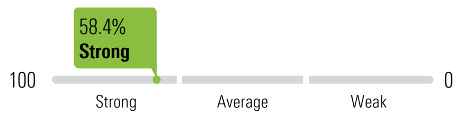
ESG Risk Rating Breakdown

Exposure	
Company Exposure[1]	53.2
– Manageable Risk	49.4
Unmanageable Risk[2]	**3.8**
Management	
Manageable Risk	49.4
– Managed Risk[3]	28.8
Management Gap[4]	**20.6**
Overall Unmanaged Risk	**24.4**



● Subject ○ Subindustry (49.0)

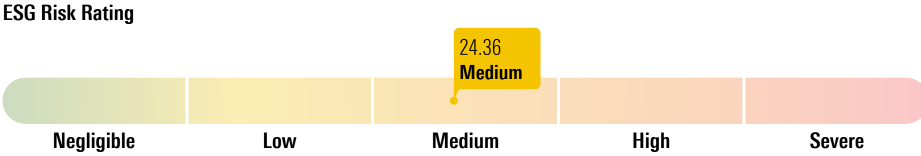




- Exposure represents a company's vulnerability to ESG risks driven by their business model
- Exposure is assessed at the Subindustry level and then specified at the company level
- Scoring ranges from 0-55+ with categories of low, medium, and high-risk exposure

- 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 58.4% 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 Apr 02, 2025. Highest Controversy Level is as of Apr 08, 2025. Sustainalytics Subindustry: Diversified Banks. 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 02 Apr 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		
Bank of America Corp	53.2 | Medium	0	55+	58.4 | Strong	100	0	24.4 | Medium	0	40+
Citigroup Inc	53.3 | Medium	0	55+	69.5 | Strong	100	0	18.9 | Low	0	40+
Wells Fargo & Co	58.6 | High	0	55+	45.3 | Average	100	0	33.8 | High	0	40+
JPMorgan Chase & Co	53.7 | Medium	0	55+	52.9 | Strong	100	0	27.3 | Medium	0	40+
PNC Financial Services Group Inc	42.0 | Medium	0	55+	45.8 | Average	100	0	23.7 | Medium	0	40+

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Appendix
Historical Morningstar Rating

Bank of America Corp BAC 14 Apr 2025 21:33, 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
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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
★★★	★★★	★★★	★★★	★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★	★★★

Citigroup Inc C 14 Apr 2025 21:33, 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
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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
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Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★★	★★★★	★★★

JPMorgan Chase & Co JPM 14 Apr 2025 21:33, 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
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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 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
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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
★★	★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★
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, 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.

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.

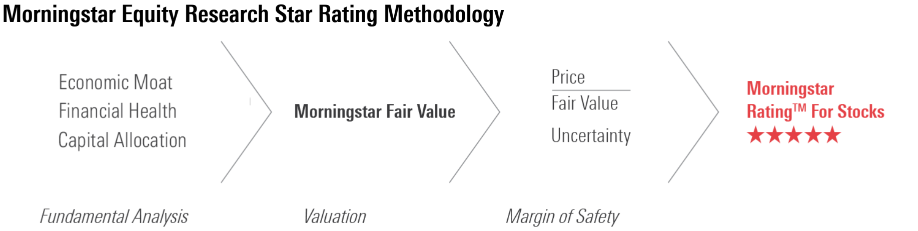
Because a dollar earned today is worth more than a dollar earned tomorrow, we discount our projections of cash flows in stages I, II, and III to arrive at a total present value of expected future cash flows. Because we are modeling free cash flow to the firm—representing cash available to provide a return 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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Research Methodology for Valuing Companies

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 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.

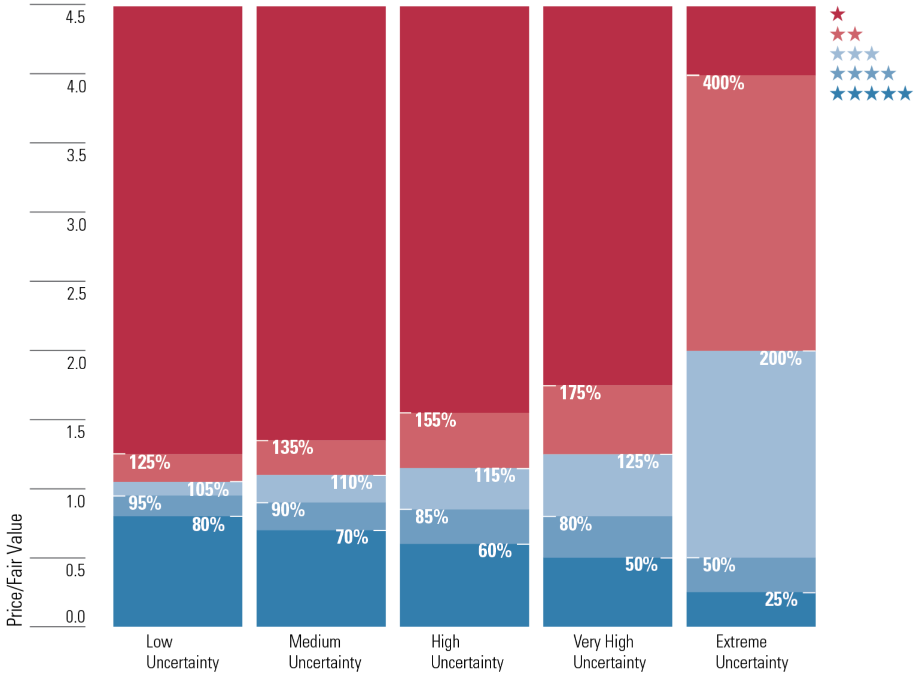
4. Market Price

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

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

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

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

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

Research Methodology for Valuing Companies

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.

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.

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

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

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

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

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

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

Risk Warning

Please note that investments in securities are subject to market and other risks and there is no assurance or guarantee that the intended investment objectives will be achieved. Past performance of a security may or may not be sustained in future and is no indication of future performance. A security investment return and an investor's principal value will fluctuate so that, when redeemed, an investor's shares may be worth more or less than their original cost. A security's current investment performance may be lower or higher than the investment performance noted within the report. Morningstar's Uncertainty Rating serves as a useful data point with respect to sensitivity analysis of the assumptions used in our determining a fair value price.

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