
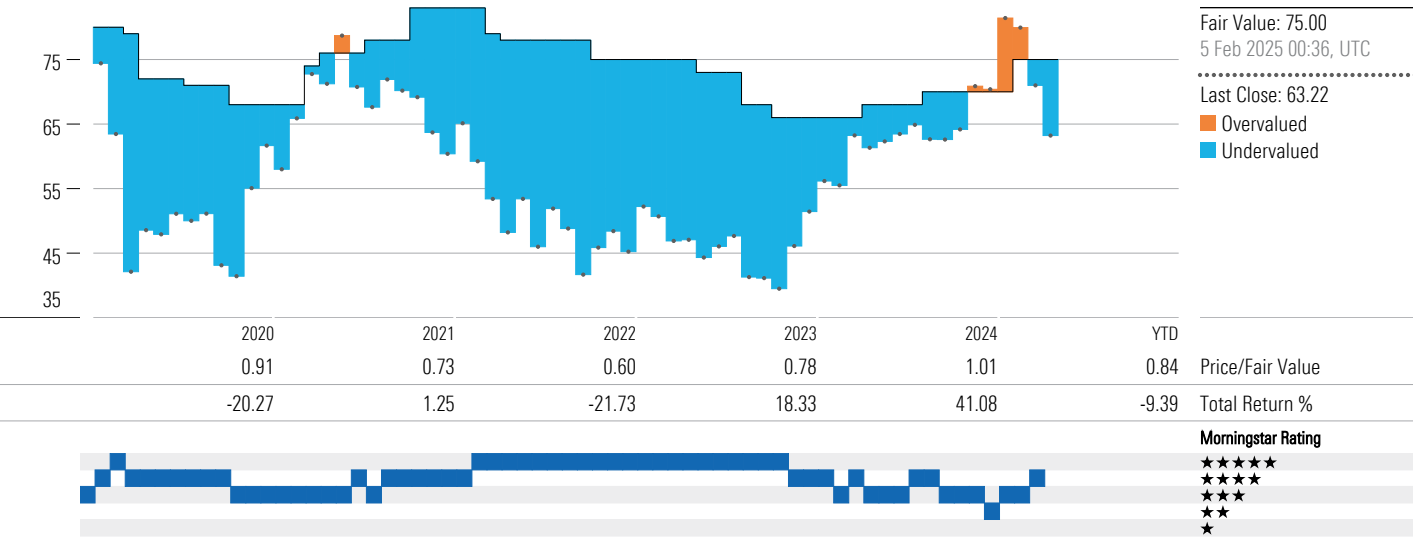


**Citigroup Inc** C ★★★★★ 14 Apr 2025 21:33, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
63.22 USD 14 Apr 2025	75.00 USD 5 Feb 2025 00:36, UTC	0.84	122.85 USD Bil 15 Apr 2025	None	Large Value	Medium	Standard	

**Price vs. Fair Value**



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

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

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

# Citigroup Earnings: Trading Drives Materially Higher Profitability; Maintaining Our \$75 Valuation

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

Robust trading revenue helped Citigroup report improved profitability in the first quarter, with earnings of \$1.96 per share equating to a return on tangible equity of 9.1%. Investors should remain cognizant of the economy facing considerable turbulence in 2025 due to tariff-related disruptions.

**Why it matters:** The impact of tariff-related disruptions didn't show up in the first quarter, but we think that the impacts 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 and was reported at 2.70%.

- Net interest income grew 4% on a year-over-year basis, driven by the markets business and balance sheet growth, partially offset by the impacts of lower rates.
- Fee revenue also did well during the quarter, powered by the trading business, where principal transaction revenue was up 72% on a sequential basis and 20% year over year. The bank did a good job of controlling core expenses, as they were down 3% compared with the previous year.

**The bottom line:** We plan on maintaining our \$75 per share fair value estimate for no-moat-rated Citigroup after incorporating first-quarter results and believe that the shares are undervalued. Citigroup is relatively cheaper but is also slightly higher on the risk and uncertainty spectrum.

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

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Sector	Industry
 Financial Services	Banks - Diversified

## Business Description

Citigroup is a global financial-services company doing business in more than 100 countries and jurisdictions. Citigroup's operations are organized into five primary segments: services, markets, banking, US personal banking, and wealth management. The bank's primary services include cross-border banking needs for multinational corporates, investment banking and trading, and credit card services in the United States.

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

**Between the lines:** The US personal banking segment had a great quarter with a ROTE of 12.9%. For context, this compares with an average ROTE of 5.5% in the previous four quarters.

- Most of the improvement in the business was due to lower provisions on credit card loans within the segment. We think this will reverse in future quarters as card charge-offs edge higher.

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

Citigroup has an international commercial banking franchise and a domestically focused retail banking unit. The bank's commercial operations—services, markets, and banking segments—have large trading, investment banking, international corporate banking, and custody operations. The commercial banking operation is Citi's most unique business, as its global footprint is hard to replicate. This international presence will help Citigroup remain a bank of choice for cross-border companies. While this global presence offers some advantages, it is expensive and complicated to maintain, and the bank's markets desk also produces low returns. As a result, returns for the commercial banking business have been mixed.

The bank's other main segments are its US personal banking (USPB) unit and its wealth unit. USPB is a primarily US-focused credit card business, with some retail banking. The wealth segment provides services for global clients. These units have had mixed results in the past, as the bank is not as dominant or as profitable as its peers in retail banking, credit card, or wealth operations.

Citi is in the midst of a major turnaround and remains a complex story. The bank is working through consent orders from regulators, selling off its international consumer operations, and refocusing its wealth unit. Simplification should make the bank easier to understand and structurally more focused, but we think Citi will still trail its peers from a profitability standpoint and struggle to outearn its cost of capital, and would note that the turnaround remains a difficult, multiyear journey.

Citi presents investors with a tough choice. The bank's issues are real. The tough part is this complex story has more often been a value trap rather than a true success story. The bank will need to prove it can bring core costs down, grow fee revenue, and produce momentum in the wealth business. The path toward earning its cost of capital remains uncertain. Getting consent orders removed would also be a positive catalyst. The bank's final major divestiture, its Mexico retail unit, is now set to IPO in 2026.

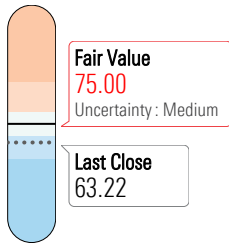
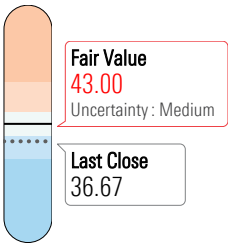
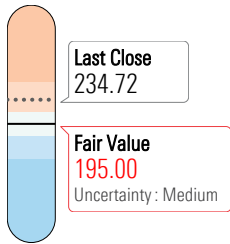
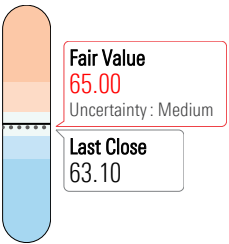
## Bulls Say Suryansh Sharma, Senior Equity Analyst, 3 Apr 2025

- Citigroup is in the middle of a strategic repositioning, making major moves such as spinning off its consumer business in Mexico and reinvesting in commercial banking and wealth businesses. Citigroup may finally emerge as a structurally improved franchise.
- Simplifying the business and selling off noncore units should help Citigroup free up extra capital and

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## Competitors

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




derisk the business, which should lead to an opportunity for share repurchases and a lower required discount rate.

- Citigroup's stock is not expensive, trading at less than tangible book value. This is not a high hurdle to clear.

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

- Management doesn't expect to hit its return targets until two from now, and the bank has historically underperformed its guidance. It's not worth waiting around for this historical value trap.
- Citigroup is a complex story, and there are still many moving parts, increasing the difficulty of predicting what the final version of Citigroup ultimately looks like.
- Citigroup's returns will remain structurally lower than peers, revenue growth will be lower than peers, and there remains room for negative surprises on expenses as the bank invests in regulatory and growth initiatives.

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

We don't believe Citigroup has a moat. We project the bank will struggle to meet our assigned cost of equity of 10%, even by the end of our forecast period. The bank's commercial banking franchise is unique in some regards, given its global presence and broad-based capabilities to serve multinational corporates, but the expenses associated with maintaining such an international presence across many legal jurisdictions and the recent increase in regulatory costs point to more limited profitability potential. Citi's US personal banking and wealth management segments also suffer from certain disadvantages that weigh on its returns, such as less-profitable credit card operations compared with peers, limited US retail deposit franchise and banking presence, and an underperforming wealth unit. The bank's trading and investment banking businesses have also been consistently underperforming with weak profitability, even in periods when its rivals do well. The bank has been stuck in a never-ending cycle of restructuring and transformation initiatives with an overly complicated corporate structure. As such, the bank is underearning its cost of capital, and we think it will be difficult to structurally change these business units in a way that gives us confidence in the bank's ability to outearn its cost of capital.

Citigroup is one of the more distinctive US money-center banks, with a limited US branch footprint, domestic retail operations that focus heavily on the credit card business, and well over half of the bank's profits and capital focused on commercial banking operations. In our opinion, the core business model of the bank is structurally riskier compared with other money-center banks. Citi's business model is built around providing cross-border banking needs for multinational corporations and the firm has a notably weak retail banking presence in the US. It also features much higher exposure to international markets, and a relatively riskier product mix. While Citigroup is a large player in certain areas, including investment banking, trade services, credit cards, and fixed-income, commodity, and currency products, this has not led to a consistently high return on tangible equity in the past, and we think that the bank will remain disadvantaged by its business mix compared with its other money center peers in the future as well. We estimate the midcycle return on tangible equity of around 8% for the bank compared with the cost of equity of around 10%.

## Industry Dynamics:

Citi's services segment, which includes its treasury and trade solutions, or TTS, and securities services capabilities, is undoubtedly the crown jewel of the company. TTS provides an integrated platform for cash management, payments, trade and working capital solutions to multinational corporations operating in various countries. Securities services provide the bank's corporate clientele with a comprehensive product offering to access global markets across the entire investment cycle, including local market expertise, post-trade technologies, and data solutions. The bank is a global market leader in the TTS segment, as per Coalition Greenwich data and the bank's internal estimates. The services segment makes more than 70% of its revenue outside the US and is a source of relatively stickier

Citigroup Inc C★★★★★

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deposits for Citi. Notably, while the segment had more than \$800 billion in deposits, its total loans were less than \$100 billion as of 2024. While other money-center banks leverage their US retail banking franchise to fund commercial loans, Citi leverages deposits from its international commercial banking division to fund US retail loans. This makes the bank’s business model very different from other money-center banks—and inherently more risky, in our opinion.

The markets segment provides trading services (market-making, risk management solutions, brokerage) for equities, foreign exchange, interest rates, spread products, and commodities. As of 2023, the bank was ranked second in fixed-income trading and sixth in equities trading, according to Coalition Greenwich data and the bank’s internal estimates. Despite having one of the broadest geographical footprints (trading floor in 80 countries) and capabilities in the trading business, the bank has continuously been struggling with low profitability and weak risk management. The banking segment houses the investment banking arm of the bank and certain corporate lending functions. The bank is ranked fifth globally in terms of investment banking revenue, as per Dealogic in 2024, with a 4.5% share. That said, Citi has underperformed its peers in terms of investment banking profitability for several years despite its strong market share.

Citi’s wealth business has also been relatively weak in terms of scale and profitability when compared with its money-center rivals. The wealth segment provides its services to high-net-worth clients and houses the private bank business, Citigold—wealth management through financial advisors—and ‘Wealth at Work,’ or financial services tailored to certain professional industries such as law firms, consultancies, and so on. About half of the wealth segment revenues come from North America, while the other half are derived from international markets. The wealth segment had about \$600 billion in client AUM and another \$300 billion in client deposits as of 2024. Citi’s wealth business does not have the scale or the concentration benefits of some of its peers, and the returns in the business have been disappointing despite the business having relatively asset-light characteristics.

The bank’s US personal banking segment includes its credit card business and its traditional retail banking. More than 80% of revenue in this segment comes from credit cards, and the retail banking business is notably small. Citi has about \$100 billion in deposits within this segment, which is less than 10% of the total deposits on the bank’s consolidated balance sheet. It would be safe to say that Citi’s US retail banking presence (excluding credit cards) is de minimis compared with its money-center peers. This is perhaps one of the biggest structural weaknesses of the bank, and it will be almost impossible to change the structure of the bank’s deposit franchise in the future. Citi’s US retail business revolves around its credit card operations, which is ranked second in terms of both loans outstanding and card spending per the bank’s internal estimate according to figures disclosed in its last investor day. Despite this sizable scale in its credit card business, strong profitability has been elusive given the bank’s reliance on private label relationships and co-branded cards. The bank’s credit card loan portfolio is also skewed toward lower-quality borrowers compared with peers JPMorgan and Bank of America.

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## 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 economic 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, although 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 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 certain elements in Citi's investment banking businesses benefit from intangible assets, we do not award an intangible asset moat source to money-center banks, given its limited contribution on a consolidated basis.




## Wealth Management:

Wealth management businesses typically benefit 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 their client assets if they switch firms. While wealth management businesses typically showcase moaty characteristics, Citi's wealth franchise lacks the scale, regional concentration, capabilities, and consistent profitability required to earn a moat.

## Retail and Commercial Banking:

We argue that bank moats are derived primarily from two sources: cost advantages and switching costs.

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We see cost advantages as stemming from three primary factors: a low cost deposit base, excellent operating efficiency, and conservative underwriting. Regulatory costs represent a final factor that must also be considered.

From a deposit cost perspective, we view the bank as disadvantaged. While more granular numbers are admittedly skewed by the large percentage of deposits that are technically housed in Sioux Falls, South Dakota, Citigroup does not have a leading share in most metro areas, and the bank’s overall branch coverage in the US is much more limited than its peers. This has led to an inability to gather a cheap deposit base, with the bank’s overall mix of interest-bearing versus non-interest-bearing deposits and the rates the bank pays on its interest-bearing deposits both being significantly disadvantaged compared with the rest of our US banking coverage. A prime reason for Citi’s disadvantage in deposit costs is partly due to the fact that most of its deposits come from yield-sensitive customers in its commercial banking business, and its share of cheap US retail deposits is relatively weak. Citi’s cost of interest-bearing deposits has been consistently higher than the industry average, thereby indicating a disadvantaged deposit franchise. On a cost-advantage basis, we view the bank’s deposit base as likely to remain disadvantaged in the future as well, given its structural characteristics.

From an operating efficiency perspective, we had previously viewed Citigroup as average. The bank has a very light US branch footprint and tends to focus more on electronic distribution methods, which we believe can help with operating efficiency. However, the bank's global commercial banking business is expensive to maintain, and the bank is subject to higher core costs related to regulatory pressure. As such, we now expect that the bank will be disadvantaged versus most of its competitors under our coverage.

Citi has a much higher exposure to certain business lines, such as wealth management, investment banking, and trading, 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. Having said this, Citi seems to have lower efficiency than the industry, even if we adjust for the bank's business mix. The only possible exception to this is the bank's services business, where we do see traces of strong operational efficiency. Overall, Citi’s consolidated efficiency ratio remains lackluster—while most of the US money center banks we cover would fall below the 60% threshold for their efficiency ratio in a favorable rate and macroeconomic environment, we project that Citigroup will remain stuck above 60% indefinitely, a meaningfully worse level, comparatively.




From a credit cost perspective, we do not see Citigroup as advantaged. Citigroup fared poorly during the Great Recession, requiring one the biggest bailout amongst major banks and causing a permanent impairment of capital for shareholders in the process. Although its underwriting has improved in the interim, the firm still performs relatively worse than its peers. To this effect, Citi’s credit costs (net



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charge-offs as a percent of loans) have consistently been higher than the US banking industry during the last decade. While its consolidated credit costs are impacted by higher exposure to the riskier credit card business, even if we were to look even at credit cards in isolation, Citi’s book skews toward lower-quality customers, which leads to higher credit costs compared with its peers. Overall, the bank has taken many steps over the past decade to simplify and derisk its operations. However, we think this has led the bank to become closer to average rather than leading to any advantages.


Banks primarily earn moats because of their cost advantages, but the competitive positioning of a particular bank can be reinforced by its ability 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. In banking, where many of the products are commodified to a large degree, getting potential clients into your banking platform (where it helps to have more products in more places) and then keeping them there (where more products equate to higher switching costs) matters a lot. Citigroup arguably pulls this off in certain aspects of its commercial banking franchise, but its retail banking business or its wealth management business hasn’t been as successful in building deep customer relationships spanning multiple product lines.

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 deposits 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



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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 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. Citi is substantially weak when compared with its other money-center rivals in terms of the quality and stickiness of its deposit franchise.




## Scale and Scope:

Overall, we believe the money-center bank'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 scope and creates switching costs for customers as they use the bank for more and more products. While Citigroup is a large bank, we do not see much of an advantage from economies of scope. Looking at the North American retail franchise, the bank simply does not have as robust a presence or product set as its peers. The bank is mostly focused on its credit card business, and efforts to refocus on and build out the wealth business are still in their early days. For the commercial business, while the bank theoretically has strong and distinct offerings here for multinational corporations, the bank is simply unable to monetize this in a way that leads to high enough excess profitability. Arguably, Citi's Services segment houses businesses within its commercial operations that can be classified as competitively advantaged, but the limited contribution of this segment to the overall bank limits its overall impact on the bank's moat rating. Yes, Citi's global commercial banking business is difficult to replicate, but this hasn't led to an ability to properly monetize it. The expenses of maintaining a physical presence in nearly 100 countries, the capital that is eaten up by maintaining trading floors in over 80 markets, and the need to compete with local players for a variety of clients all contribute to this dynamic.

## 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 Citigroup 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 today. 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

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majority of US regional banks, which often have concentrations in individual states or local economies. This diversification is positive from a risk perspective.

Citigroup is large enough to be considered a global systemically important bank and has the second-highest GSIB surcharge, which supports the view that Citigroup faces higher regulatory requirements and costs than most. 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 (liquidity coverage ratio and supplementary leverage ratio, for example), and we don't see any massive regulatory relief coming for the large money center banks.

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 Citigroup has earned an average ROTE of about 8.5% in the past 10 years, which is significantly below our 10.0% cost of equity for the bank. We project that the bank should be able to earn a ROTE of around 8.0% in our midcycle forecast year. In the case of Citigroup, we don't have either quantitative or qualitative evidence of an economic moat, thereby underpinning our no-moat rating for the bank.

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


We are increasing our fair value estimate for Citigroup slightly to \$75 per share from \$70. Our fair value estimate is equivalent to 0.87 times tangible book value per share as of December 2024. We forecast that most noncore units will be sold off, and the Mexico retail unit will be spun off by 2026. We have assumed that the Mexico unit of the bank is worth \$6 billion, for a net adjustment of \$4.5 billion (including margin of safety and time value adjustment), or approximately \$2.5 per share. We forecast no value generation from the sale of the bank's Asia consumer units.

We have net interest income growing modestly by 0.8% in 2025, due to flattish net interest margins and muted balance sheet growth. We see more rate cuts and the spinoff of Mexico business further eating into NII in 2026, even as card balances grow. We project NII in 2026 to decline by around 2% on a year-over-year basis. In terms of fee-based businesses, we expect investment banking to recover and asset valuations to remain buoyant thereby assisting the wealth management business. Trading-related revenue should also remain strong in 2025. On an absolute basis, we think that the bank should be able to achieve management's guidance of \$83.5 billion-\$84.5 billion in overall revenue during 2025.

Over time, on a core basis, we expect overall revenue growth of around 2%-3% annually on a midcycle basis lower than management's medium-term target of 4%-5% growth. We imagine better wealth and commercial banking fee performance would be the primary way for Citi to meet its own goals.

Expenses will be a key lever to watch, with much uncertainty remaining around how large any expense savings can be in upcoming years. We expect the overall expense base of the bank to remain flattish for

# Citigroup Inc C ★★★★★ 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 Assessment¹
63.22 USD 14 Apr 2025	75.00 USD 5 Feb 2025 00:36, UTC	0.84	122.85 USD Bil 15 Apr 2025	None	Large Value	Medium	Standard	 2 Apr 2025 05:00, UTC

the next two years due to management's efficiency initiatives. Expense control is a key lever for our valuation. We also believe management will have to meet this to have any chance of meeting its overall profitability goals.

Our forecasts have the bank essentially missing almost every one of management's medium-term goals, including an efficiency ratio of less than 60% (we're at 63%), 4%-5% revenue growth (we project 2%-3% core revenue growth on a midcycle basis), and an ROTCE of 11%-12% (ours stands at 8%). With our forecast ROTCE stuck at 8%, below our 10% cost of equity, our fair value estimate is below tangible book value.

Getting through consent orders, more clarity after business unit sales, progress on expense savings, and any momentum toward hitting management's goals could all be catalysts for Citi's shares.

## Risk and Uncertainty Suryansh Sharma, Senior Equity Analyst, 4 Feb 2025




An investment in Citi entails a large amount of regulatory and macroeconomic risk. Compliance costs are high, the firm is large and complex, and the bank is a prime target for regulators seeking fines and litigants seeking compensation for any potential 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, none of which are under management's control. Most lines of business at Citi are economically sensitive and the bank has an outsize geographical exposure. The bank is also subject to the Federal Reserve's annual stress test. Citigroup's international presence is another source of risk. A final risk is business disruption. The banking industry is going through more technological changes than ever before. As more transactions take place digitally and the industry is increasingly changed by technology, it is uncertain how this will play out or how it will disrupt moats in the banking industry.

From an ESG perspective, commercial banks are expected to have strong product governance. Predatory or discriminatory lending practices are examples of poor product governance, and this can affect certain banks at times. We view most product governance and social risks as manageable and incorporate a steady level of operational expenses related to compliance and litigation in our models. Outside of the rare, headline-grabbing scandals, we don't see social risks as having a material effect on our valuation. Banks also lend to certain sectors that can come under more scrutiny at times, like gun manufacturers or energy, for example. Commercial banks don't directly have a large environmental footprint, and governance practices are in line with most companies.

While the bank has some unique uncertainties, we think the bank's ongoing simplification of its business helps warrant a Medium Morningstar Uncertainty Rating, although admittedly on the higher end of Medium.

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

We give Citigroup 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. Citigroup had a common equity Tier 1 ratio of 13.6% as of fourth-quarter 2024, which we view as appropriate for now, although we hope eventually the bank will be able to bring down its GSIB and SCB requirements as it simplifies. We view the company's capital investments as standard. Citigroup was at the center of value-destroying capital allocation during the financial crisis of 2008 and has admittedly not been perfect since. We don't see Citigroup being able to become one of the premier banking franchises, but we think allocation has improved enough in the recent past to warrant a Standard rating. We assess the company's capital return strategy as appropriate. Citigroup, like most banks, focuses on maintaining a dividend and internal investments, with excess capital being used for share repurchases.

The bank has had its low points throughout its history, but we believe things have improved since the financial crisis. The board of directors has improved as Citigroup now maintains an independent chair, John Dugan, who has extensive experience in the industry, including as the US comptroller of the currency. Other members of the board boast experience at premier financial-services companies, and we think the board is in a better position to oversee improvements at Citigroup, although improvements have admittedly been slow-moving over the years.

Jane Fraser succeeded Michael Corbat as CEO in March 2021. Like Corbat, Fraser has moved around the bank and helped turn around and reinvigorate units with issues. Corbat gained a lot of experience during his time leading the "bad bank" unit of Citigroup, Citi Holdings, and Fraser has had to handle similar tasks in her time at the firm. During Corbat's time at the helm, he helped scale back the bank's operations, cut costs, close branches, and work through a series of divestitures. We think Citigroup made a lot of progress under Corbat's watch, although the bank still has a way to go and hasn't always delivered on all of its promises.

Fraser boasts experience in Europe, Latin America, and the US, and she has worked in multiple units across the bank, including wealth management, mortgage banking, consumer banking, and commercial banking. We like her broad experience at Citigroup and that she has taken on tough projects that span Citi's diverse operations. She has wasted no time in putting her mark on the bank's direction, deciding to sell off multiple units (including the Mexico consumer unit) and refocus on commercial banking, wealth, and the North America consumer business. These are much more drastic moves than we saw under her predecessor. We think the moves make sense strategically, but global wealth, commercial banking, and trade finance remain intensely competitive spaces. This will not be a quick or easy turnaround. Management has recently commented that it is close to hitting its medium-term return targets but we are skeptical about the bank's ability to consistently earn high returns in the next few years. The next phase of Fraser's turnaround is underway, with the latest announcements regarding the

Citigroup Inc C★★★★★

14 Apr 2025 21:33, UTC

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trimming of management layers. Time will tell how much Fraser can transform Citigroup.

Analyst Notes Archive

Citigroup Earnings: Upbeat Outlook Led to a 7% Rise in Stock but Turnaround Still Down the Road  
Suryansh Sharma,Senior Equity Analyst,15 Jan 2025

Citigroup ended the year with a middling set of numbers, but upbeat management guidance for 2025 and a \$20 billion repurchase program announcement led to a 7% rise in the share price. The bank reported fourth-quarter earnings of \$1.34 per share, equating to an annualized ROTE of 6.1%. Why it matters: Fourth-quarter results were boosted by continued fee momentum across services, investment banking, and asset management, but management's outlook on 2025 expenses and 2026 profitability remained the biggest highlights for the quarter. Management projects overall revenue to grow by 3%-4% in 2025 and expects net interest income, or NII, to be up modestly compared with the 2024 level. The impact of lower rates on NII is expected to be more than offset by balance sheet growth and deployment of maturing securities in higher-yielding assets. 2025 expenses are expected to be slightly lower than the expenses during 2024. Interestingly, management also published that it expects to hit 10%-11% return on tangible equity by 2026 as a result of continued revenue growth and a further decline in expenses in 2026. Between the lines: The bank is currently achieving lackluster returns even though it has a relatively big exposure to segments like credit cards, trading, and investment banking, which should ideally do well in the current environment. The bottom line: We plan on maintaining our \$70 per share fair value estimate for no-moat-rated Citigroup after incorporating fourth-quarter results. We are glad to see the expense control at the bank in recent years and believe that efficiency improvements, headcount rationalization, and resolution of legacy issues in the bank's cost structure would be keys for it to achieve its medium-term target. Citi has a long history of announcing ambitious targets and not meeting them. We are skeptical about management's 2026 ROTE commentary and would like to see more evidence of it before incorporating it into our models.

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

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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.

## **Citigroup Earnings: Strength in Trading and Investment Banking Masks Pressure on NII** Suryansh Sharma, Senior Equity Analyst, 15 Oct 2024

No-moat-rated Citigroup posted a middling set of numbers in the third quarter with a profit of \$3.2 billion, or \$1.51 per share, down 7% compared with \$1.63 per share in the third quarter of the previous year. Fee income during the quarter was strong with notable strength in investment banking and principal transactions revenue, but net interest income continued on a downward trajectory. The bank reported a net interest margin of 2.33% in the third quarter, down from 2.41% in the previous quarter and 2.49% in the prior year's same quarter. The services segment remains the strength of the company, but the performance of other segments like markets, banking, wealth, and personal banking continues to be underwhelming. The third-quarter numbers resulted in a return on tangible equity of 7.0% for the bank, which is materially lower than its medium-term target of 11%-12%. The firm's overall results are particularly lackluster, given various tailwinds like buoyant asset valuations, above-average trading revenue, and recovering investment banking fees. We are seeing some signs of progress on the expense front, but the progress is slow, and future execution remains highly uncertain, in our view. We are maintaining our \$70 per share fair value estimate for the bank after incorporating third-quarter results. Fee revenue during the quarter was supported by 7% year-over-year growth in principal transaction revenue and 31% growth in investment banking revenue partly due to higher investment-grade debt issuance. Overall revenue in the services segment grew by 8% on a year-over-year basis, driven by about an 8% growth in cross-border transaction value in treasury and trade solutions, 22% growth in assets under administration in security services, and a smaller impact from currency devaluation in Argentina. The services segment profits recorded a year-over-year growth of 23% in the third quarter due to operating leverage, resulting in a strong ROTE of 26.4%.

## **Citigroup Earnings: Continued Expense Diligence Will Be Key for Turnaround to Succeed** Suryansh Sharma, Senior Equity Analyst, 12 Jul 2024

# Citigroup Inc C ★★★★★ 14 Apr 2025 21:33, UTC

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No-moat-rated Citigroup reported middling second-quarter results with earnings per share of \$1.52 compared with \$1.33 in the year-ago quarter. Citi was issued civil money penalties totaling \$136 million by regulators for not meeting data quality milestones related to the Federal Reserve Board's 2020 consent order. Citi has committed to investing more resources to resolve the data quality issues in its regulatory reporting. We are maintaining our \$68 fair value estimate as we incorporate second-quarter results. Our long-term outlook for Citi is largely unchanged. Second-quarter net interest income was flattish on a sequential basis and declined 3% year over year. Noninterest revenue grew 20% year over year and was mainly driven by improvements in the services business, buoyant equity markets valuations, solid trading revenue, and 60% growth in investment banking revenue. Excluding the FDIC charge and civil money penalties, second-half expenses will have to come in around 3% lower than the first half to meet Citi's full-year expense guidance. We think that the bank should be able to meet its expense guidance, given the lower expenses related to organizational efficiency initiatives, market exits, and elimination of certain stranded costs. One key milestone in Citi's business transformation plan is that we are seeing evidence that major restructuring initiatives are now near completion, allowing the company to focus more on offensive growth opportunities within its businesses, especially its flagship services segment. Overall, Citi is tracking well to meet our full-year expectations, but the second half of the year is still crucial to ensure that it can drive expense efficiency and continue to capitalize on the cost savings from its extensive reorganization.

## Citigroup Earnings: Laser-Like Focus on Expenses Is Required for Achieving Long-Term Targets

Suryansh Sharma, Senior Equity Analyst, 12 Apr 2024

No-moat Citigroup reported better-than-expected first-quarter earnings at \$1.58 per share compared with the FactSet consensus of \$1.18. There was an incremental \$251 million FDIC special assessment charge related to the FDIC increasing its estimated loss from the March 2023 banking events. Other non-recurring expenses included \$225 million of restructuring charges related to organizational simplification. We do not anticipate a material change to our \$68 per share fair value estimate for the bank as we incorporate first-quarter results. First-quarter revenue grew around 3% from the prior-year quarter, excluding divestiture-related impacts. Fee income was primarily driven by strong results in the services business, robust trading revenues, and a 35% rebound in investment banking revenue compared with the previous year. Net interest income, or NII, was down by around 2.2% sequentially as net interest margins are starting to come under pressure. We expect NII to be down by around 2% for the full year, while fee income remains strong to drive Citi toward the low end of its 2024 revenue target of \$80 billion-\$81 billion. The current annualized run rate for expenses, excluding the FDIC charge, is running about 3.7% higher than management's guidance of \$53.5 billion-\$53.8 billion for the year. The good news is that the absolute expense base should trend downward through the year as repositioning costs become smaller. We think the turning point on the expense front is most likely to be in the back half of 2024. This year is positioned to be a transitional year for the bank before we begin to see



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meaningful results. As Citi continues to exit international consumer businesses and the separation of the Mexico business comes to fruition, we think we should start to see more significant expense savings. Citi's business transformation efforts are beginning to show some progress, and we expect to see more diligence in managing the core expense base of the bank by the management.

## **NYCB Was Uniquely Risky; We Would Not Read Too Much Into the Entire Banking Sector** Eric Compton, CFA, Director, 7 Feb 2024

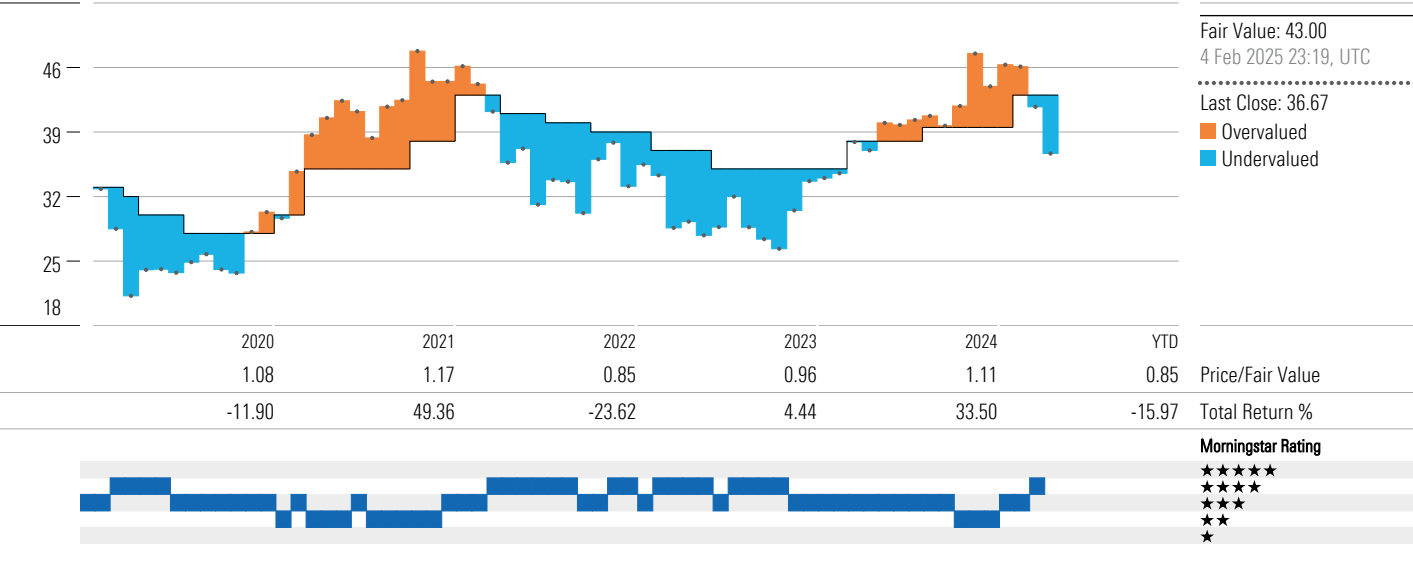
Our thesis on the U.S. banks following the Silicon Bank fallout was that all of the banks we covered, except for First Republic (which we downgraded to a \$3 fair value estimate on March 20, 2023, and a \$0 fair value on April 27, 2023), would be able to weather the storm. We believed that banks in trouble were in uniquely risky positions. We believe this thesis has largely held up, and sorting through banks based on their unique risk profiles remains necessary and valuable. To the extent that the market is selling off all banks because of what has happened to NYCB, we think there could be opportunities once again while acknowledging the significant time horizon risk (how long does it take for the banks to prove to the market they are fine) and the choppy waters that could occur in the meantime (we expect more commercial real estate related loan losses in the future). We have highlighted that commercial real estate, or CRE, related risks have been lurking behind the scenes for some time. Our CRE thesis has been that there will be losses, it will take years to sort through, and there will likely be some bank failures. However, we again predict our coverage would be able to weather the storm. The latest developments with NYCB have not caused us to change that thesis. While we do not cover NYCB, we have been following the situation. NYCB was in a uniquely risky position. NYCB had materially higher CRE exposure than any bank under our coverage, roughly double or more the amount of CRE exposure relative to capital. NYCB was also subject to increasing regulatory scrutiny because it had recently surpassed \$100 billion in assets following its acquisition of Signature Bank. No bank under our coverage is set to see its regulatory requirements change in a similar way. NYCB has also had a more severe deterioration in core profitability. While many banks under our coverage have also seen pressure on profits, NYCB is coming under more pressure than most banks we cover. ■■■

Citigroup Inc C★★★★★

14 Apr 2025 21:33, UTC

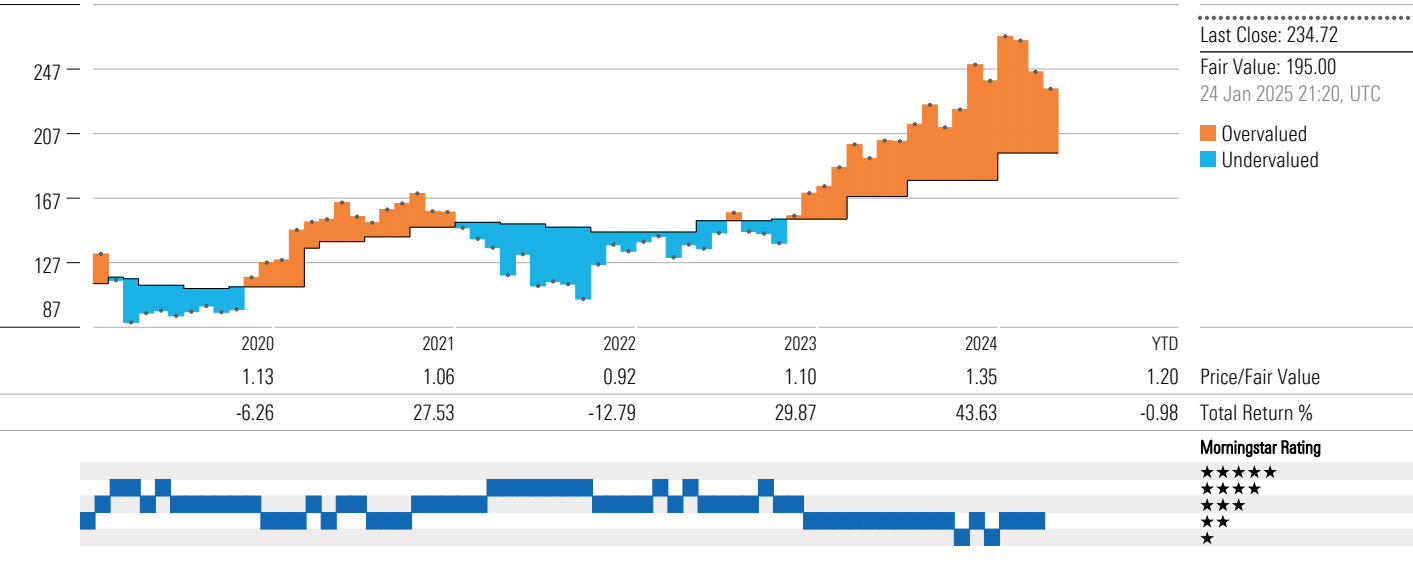
Competitors Price vs. Fair Value

Bank of America Corp BAC



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

JPMorgan Chase & Co JPM




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



# Citigroup Inc C ★★★★★

14 Apr 2025 21:33, UTC

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## Morningstar Valuation Model Summary

### Financials as of 04 Feb 2025

Fiscal Year, ends 31 Dec	Actual			Forecast				
	2022	2023	2024	2025	2026	2027	2028	2029
Net Interest Income (USD Mil)	48,668	54,900	54,095	55,458	54,404	53,256	54,580	56,879
Non Interest Income (USD Mil)	26,730	23,562	27,044	28,064	28,454	29,112	29,763	30,508
Total Pre-Provision Revenue (USD Mil)	75,398	78,462	81,139	83,522	82,857	82,369	84,343	87,388
Provision for Loan Losses (USD Mil)	5,239	9,186	10,109	9,714	9,900	9,630	10,816	11,023
Operating Expenses (USD Mil)	51,292	56,366	53,984	53,656	53,599	53,786	54,706	56,090
Operating Income (USD Mil)	18,867	12,910	17,046	20,151	19,358	18,953	18,821	20,275
Net Income Available to Common Stockholders (USD Mil)	15,136	9,229	12,684	15,481	14,880	14,578	14,487	15,624
Adjusted Net Income (USD Mil)	13,873	8,030	11,628	14,585	13,984	13,682	13,591	14,728
Weighted Average Diluted Shares Outstanding (Mil)	1,964	1,956	1,940	1,890	1,787	1,722	1,655	1,584
Earnings Per Share (Diluted) (USD)	7.06	4.11	5.99	7.72	7.83	7.95	8.21	9.30
Adjusted Earnings Per Share (Diluted) (USD)	7.06	4.11	5.99	7.72	7.83	7.95	8.21	9.30
Dividends Per Share (USD)	2.05	2.08	2.18	2.70	2.74	2.78	2.87	3.25

### Margins & Returns as of 04 Feb 2025

	Actual			Forecast					5 Year Avg
	3 Year Avg	2022	2023	2024	2025	2026	2027	2028	
Net Interest Margin %	2.3	2.2	2.4	2.4	2.4	2.4	2.3	2.3	2.3
Efficiency Ratio %	68.8	68.0	71.8	66.5	64.2	64.7	65.3	64.9	64.7
Provision as % of Loans	1.2	0.8	1.3	1.5	1.4	1.4	1.3	1.4	1.4

### Growth & Ratios as of 04 Feb 2025

	Actual			Forecast					5 Year Avg
	3 Year Avg	2022	2023	2024	2025	2026	2027	2028	
Net Interest Income Growth %	8.4	14.5	12.8	-1.5	2.5	-1.9	-2.1	2.5	4.2
Non Interest Income Growth %	-2.7	-9.0	-11.9	14.8	3.8	1.4	2.3	2.2	2.5
Total Pre-Provision Revenue Growth %	—	4.9	4.1	3.4	2.9	-0.8	-0.6	2.4	3.6
Operating Expenses Growth %	—	6.4	9.9	-4.2	-0.6	-0.1	0.4	1.7	2.5
Operating Income Growth %	—	-31.3	-31.6	32.0	18.2	-3.9	-2.1	-0.7	7.7
Net Income Growth %	-17.8	-31.0	-39.0	37.4	22.1	-3.9	-2.0	-0.6	7.9
Earnings Per Share Growth %	-16.3	-30.8	-41.9	46.0	28.7	1.5	1.5	3.4	13.2

### Valuation as of 04 Feb 2025


	Actual			Forecast				
	2022	2023	2024	2025	2026	2027	2028	2029
Price/Earning	6.4	12.5	11.8	8.2	8.1	8.0	7.7	6.8
Price/Book	—	—	—	—	—	—	—	—
Price/Tangible Book	0.6	0.6	0.8	0.7	0.6	0.6	0.6	0.5
Dividend Yield %	4.0	3.1	3.5	4.3	4.3	4.4	4.5	5.1
Dividend Payout %	28.6	50.7	36.4	33.9	33.9	33.9	33.9	33.9

### Operating Performance / Profitability as of 04 Feb 2025

Fiscal Year, ends 31 Dec	Actual			Forecast				
	2022	2023	2024	2025	2026	2027	2028	2029
ROA %	0.6	0.4	0.5	0.7	0.6	0.6	0.6	0.6
ROE %	7.4	4.5	6.1	7.3	6.9	6.7	6.6	7.0
Return on Tangible Equity %	8.8	5.0	7.0	8.6	8.0	7.8	7.6	8.1

# Citigroup Inc C ★★★★★

14 Apr 2025 21:33, UTC

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Financial Leverage (Reporting Currency)		Actual			Forecast				
Fiscal Year, ends 31 Dec		2022	2023	2024	2025	2026	2027	2028	2029
Equity/Assets %		8.3	8.5	8.9	8.9	8.8	8.7	8.6	8.5
Forecast Revisions as of		2025		2026			2027		
Prior data as of		Current	Prior	Current		Prior	Current		Prior
Fair Value Estimate Change (Trading Currency)		75.00	—	—		—	—		—
Net Interest Income (USD Mil)		55,458	54,186	54,404		53,280	53,256		52,573
Total Pre-Provision Revenue (USD Mil)		83,522	80,814	82,857		80,764	82,369		80,657
Operating Income (USD Mil)		20,151	16,176	19,358		18,190	18,953		17,541
Net Income (USD Mil)		—	—	—		—	—		—
Earnings Per Share (Diluted) (USD)		7.72	6.16	7.83		7.37	7.95		7.39
Adjusted Earnings Per Share (Diluted) (USD)		7.72	6.16	7.83		7.37	7.95		7.39
Dividends Per Share (USD)		2.70	2.46	2.74		2.95	2.78		2.96

## 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 %	9.0
Perpetuity Year	11

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

## Discounted Cash Flow Valuation as of 04 Feb 2025

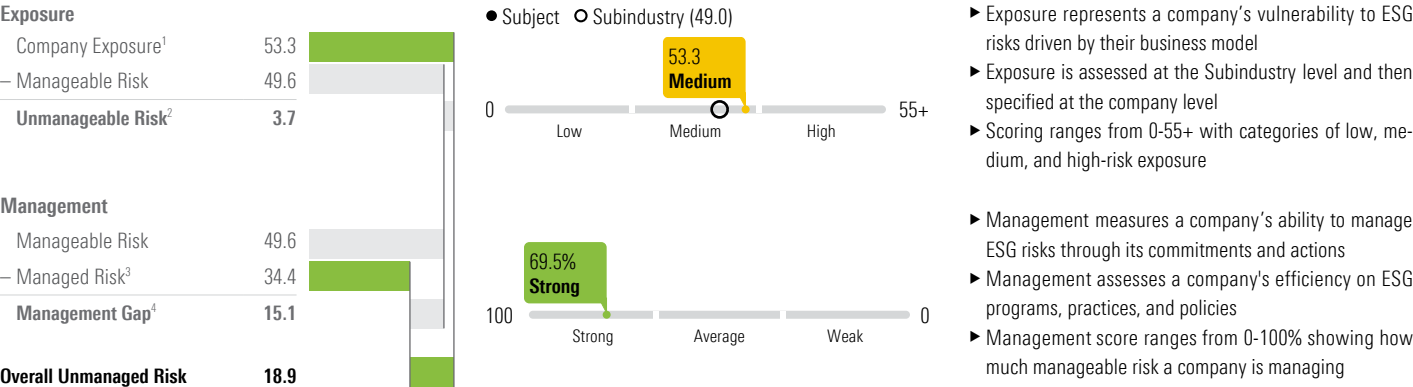
	USD Mil
Present Value Stage I	0
Present Value Stage II	0
Present Value of the Perpetuity	0
<b>Total Common Equity Value before Adjustment</b>	<b>0</b>
Other Adjustments	—
<b>Equity Value</b>	<b>137,820</b>
Projected Diluted Shares	1,829
<b>Fair Value per Share (USD)</b>	<b>75.00</b>

Citigroup Inc C★★★★★

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 Assessment¹
63.22 USD	75.00 USD	0.84	122.85 USD Bil	None	Large Value	Medium	Standard	
14 Apr 2025	5 Feb 2025 00:36, UTC		15 Apr 2025					2 Apr 2025 05:00, UTC

ESG Risk Rating Breakdown



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 69.5% 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

Peer Analysis 02 Apr 2025

Company Name	Exposure	Management	ESG Risk Rating
Citigroup Inc	53.3   Medium 0 — 55+	69.5   Strong 100 — 0	18.9   Low 0 — 40+
Bank of America Corp	53.2   Medium 0 — 55+	58.4   Strong 100 — 0	24.4   Medium 0 — 40+
Berkshire Hills Bancorp Inc	45.8   Medium 0 — 55+	64.0   Strong 100 — 0	18.2   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+

# Appendix

## Historical Morningstar Rating

### 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
★★★	★★★	★★★	★★★★	★★★★	★★★	★★★	★★★	★★★★	★★★	★★★★	★★★★
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 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
★★	★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★
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
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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
—	—	—	—	—	—	—	—	★★	★★	★★	★
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
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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
★★★	★★★	★★★	★★★	★★★	★★★	★★★★	★★★	★★★★	★★★★	★★★	★★



Wells Fargo & Co WFC 14 Apr 2025 21:35, 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
★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★★★★	★★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★

# Research Methodology for Valuing Companies

## Overview

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

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

Four key components drive the Morningstar rating: (1) our assessment of the firm's economic moat, (2) our estimate of the stock's fair value, (3) our uncertainty around that fair value estimate and (4) the current market price. This process ultimately culminates in our 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 re-

turns on invested capital (or ROIC) over and above our estimate of a firm's cost of capital, or weighted average cost of capital (or WACC). Without a moat, profits are more susceptible to competition. We have identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.

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

When considering a company's moat, we also assess whether there is a substantial threat of value destruction, stemming from risks related to ESG, industry disruption, financial health, or other idiosyncratic issues. In this context, a risk is considered potentially value destructive if its occurrence would eliminate a firm's economic profit on a cumulative or 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 (EBIT) and the net new investment (NNI) to de-

rive our annual free cash flow forecast.

### Stage II: Fade

The second stage of our model is the period it will take the company's return on new invested capital—the return on capital of the next dollar invested ("RONIC")—to decline (or rise) to its cost of capital. During the Stage II period, we use a formula to approximate cash flows in lieu of explicitly modeling the income statement, balance sheet, and cash flow statement as we do in Stage I. The length of the second stage depends on the strength of the company's economic moat. We forecast this period to last anywhere from one year (for companies with no economic moat) to 10–15 years or more (for wide-moat companies). During this period, cash flows are forecast using four assumptions: an average growth rate for EBIT 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.

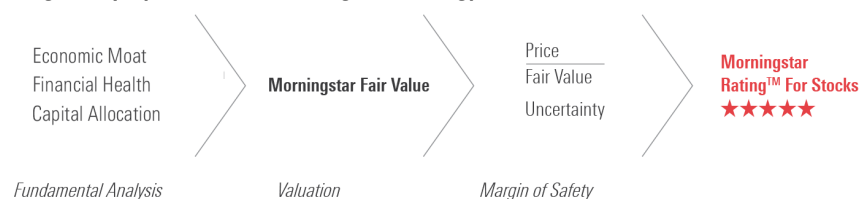
Because a dollar earned today is worth more than a dollar earned tomorrow, we discount our projections of cash flows in stages I, II, and III to arrive at a total present value of expected future cash flows. Because we are modeling free cash flow to the firm—representing cash available to provide a return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



# 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	★★★★★ Rating	★ Rating
Uncertainty Ratings		
Low	20% Discount	25% Premium
Medium	30% Discount	35% Premium
High	40% Discount	55% Premium
Very High	50% Discount	75% Premium
Extreme	75% Discount	300% Premium

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

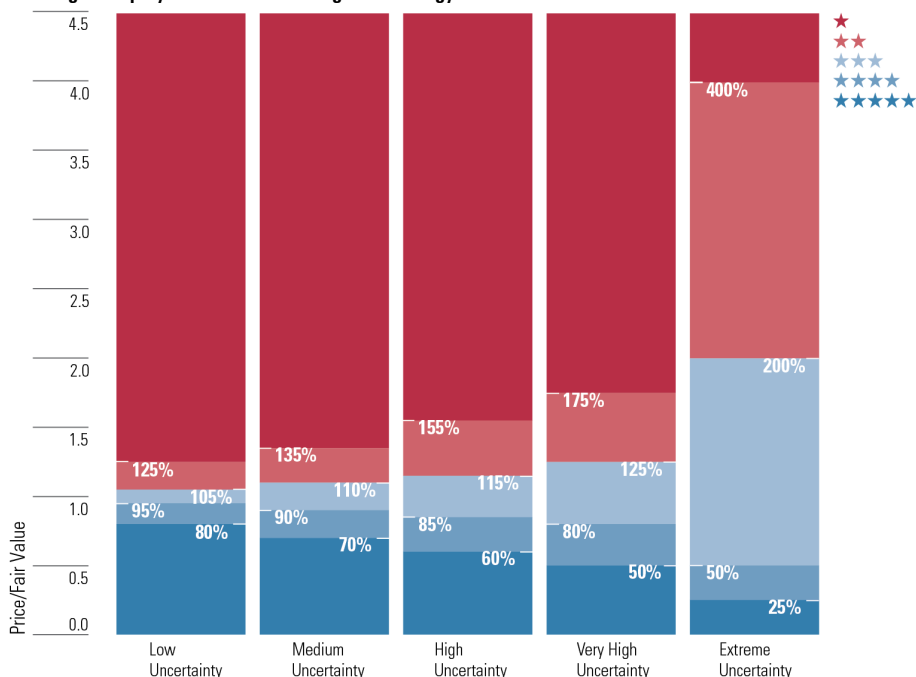
## 4. Market Price

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

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

## Morningstar Star Rating for Stocks

### Morningstar Equity Research Star Rating Methodology



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

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

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

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

The Morningstar Star Ratings for stocks are defined below:

★★★★★ We believe appreciation beyond a fair risk ad-

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

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

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

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

★ Indicates a high probability of undesirable risk-adjusted returns from the current market price over a multiyear time frame, based on our analysis. Scenario analysis by our analysts indicates that the market is pricing in an excessively optimistic outlook, limiting upside potential and leaving the investor exposed to Capital loss.

## Other Definitions

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

**Capital Allocation Rating:** Our Capital Allocation (or Stewardship) Rating represents our assessment of the quality of management's capital allocation, with particular emphasis on the firm's balance sheet, investments, and shareholder distributions. Analysts consider compan-

# 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/](https://sustainalytics.com/esg-ratings/)

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

## Risk Warning

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# Research Methodology for Valuing Companies

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