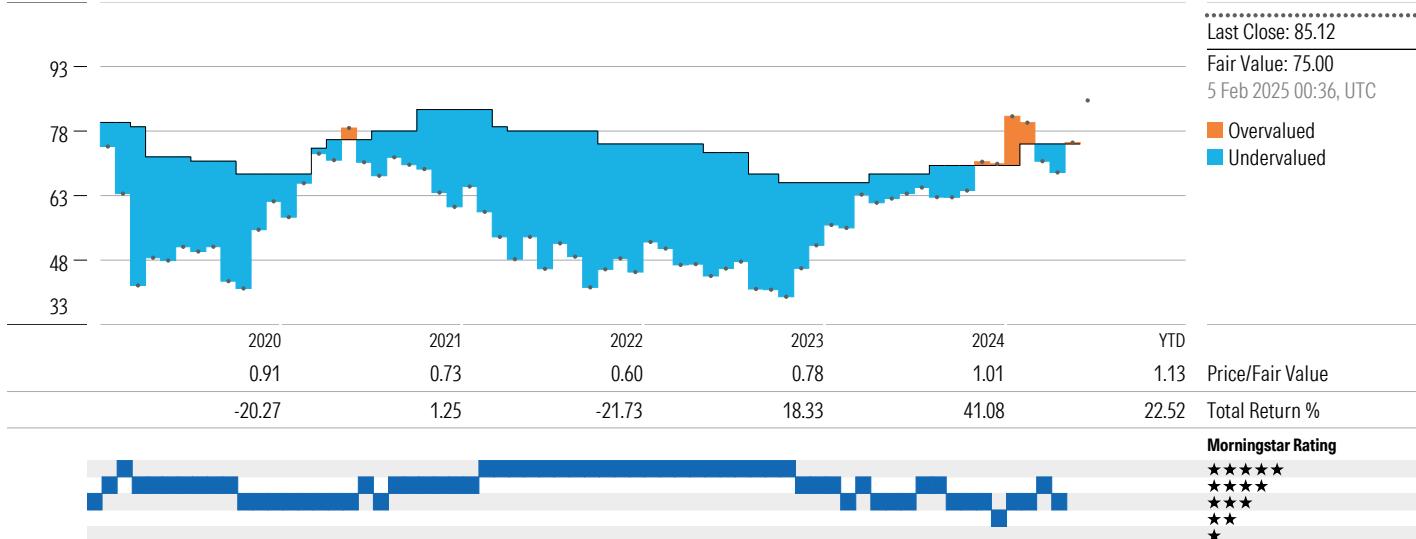


# Citigroup Inc C ★★

30 Jun 2025 21:28, UTC

| Last Price               | Fair Value Estimate                | Price/FVE | Market Cap                    | Economic Moat™ | Equity Style Box | Uncertainty | Capital Allocation | ESG Risk Rating Assessment¹  |
|--------------------------|------------------------------------|-----------|-------------------------------|----------------|------------------|-------------|--------------------|--|
| 85.12 USD<br>30 Jun 2025 | 75.00 USD<br>5 Feb 2025 00:36, UTC | 1.13      | 158.98 USD Bil<br>30 Jun 2025 | None           | Large Value      | Medium      | Standard           | <br>4 Jun 2025 05:00, UTC |

## Price vs. Fair Value



Total Return % as of 30 Jun 2025. Last Close as of 30 Jun 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.

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

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

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

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

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

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

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

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

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| Sector             | Industry            |
|--------------------|---------------------|
| Financial Services | 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.

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

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

## Business Strategy & Outlook

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.

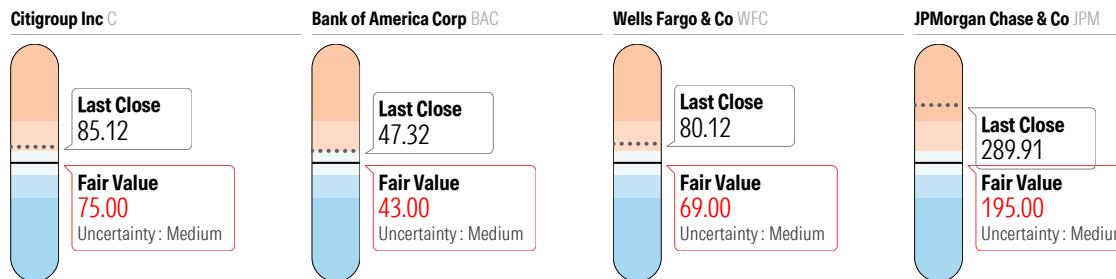
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4 Jun 2025 05:00, UTC

## Competitors



|                    |  |  |  |  |
|--------------------|--|--|--|--|
| 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            | 69.00 10 Jun 2025 23:54, UTC           | 195.00 24 Jan 2025 21:20, UTC          |
| 1-Star Price       | 101.25                                 | 58.05                                  | 93.15                                  | 263.25                                 |
| 5-Star Price       | 52.50                                  | 30.10                                  | 48.30                                  | 136.50                                 |
| Assessment         | Overvalued 30 Jun 2025                 | Fairly Valued 30 Jun 2025              | Overvalued 30 Jun 2025                 | Overvalued 30 Jun 2025                 |
| Morningstar Rating | ★★ 30 Jun 2025 21:28, UTC              | ★★★ 30 Jun 2025 21:29, UTC             | ★★ 30 Jun 2025 21:30, UTC              | ★ 30 Jun 2025 21:26, 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                               | Standard                               | Exemplary                              |
| Price/Fair Value   | 1.13                                   | 1.10                                   | 1.16                                   | 1.49                                   |
| Price/Sales        | 1.96                                   | 3.59                                   | 3.31                                   | 4.75                                   |
| Price/Book         | 0.81                                   | 1.30                                   | 1.60                                   | 2.41                                   |
| Price/Earning      | 13.13                                  | 13.73                                  | 14.30                                  | 15.39                                  |
| Dividend Yield     | 2.65%                                  | 2.21%                                  | 2.01%                                  | 1.76%                                  |
| Market Cap         | 158.98 Bil                             | 356.41 Bil                             | 260.73 Bil                             | 805.68 Bil                             |
| 52-Week Range      | 53.51–85.44                            | 33.07–48.08                            | 50.15–81.50                            | 190.90–292.65                          |
| Investment Style   | Large Value                            | Large Value                            | Large Value                            | Large Value                            |

- ▶ Simplifying the business and selling off noncore units should help Citigroup free up extra capital and 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

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growth initiatives.

## 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

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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 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

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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.

## 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:

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We argue that 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 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

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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 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

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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 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

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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.

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.

# Citigroup Inc C ★★

30 Jun 2025 21:28, UTC

| Last Price               | Fair Value Estimate                | Price/FVE | Market Cap                    | Economic Moat™ | Equity Style Box | Uncertainty | Capital Allocation | ESG Risk Rating Assessment <sup>1</sup>  |
|--------------------------|------------------------------------|-----------|-------------------------------|----------------|------------------|-------------|--------------------|--|
| 85.12 USD<br>30 Jun 2025 | 75.00 USD<br>5 Feb 2025 00:36, UTC | 1.13      | 158.98 USD Bil<br>30 Jun 2025 | None           | Large Value      | Medium      | Standard           | <br>4 Jun 2025 05:00, UTC |

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 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

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30 Jun 2025 21:28, UTC

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business helps warrant a Medium Morningstar Uncertainty Rating, although admittedly on the higher end of Medium.

## 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

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30 Jun 2025 21:28, UTC

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

## Analyst Notes Archive

### Most US Banks Won't Benefit Directly From Enhanced Supplemental Leverage Ratio Changes

Sean Dunlop, CFA, Director, 26 Jun 2025

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

### US Banks: Digitization, Data, and AI Are Changing the US Banking Landscape Like Never Before

Suryansh Sharma, Senior Equity Analyst, 19 May 2025

Advancing capabilities in digitization, data analytics, and artificial intelligence are starting to have a profound impact on banks. Physical branches no longer define banking as technology affects not only how banks operate but also how they interact with customers, manage risk, and drive growth. Why it matters: Technological advancements have powered substantial productivity improvements across the US banking industry over the past two decades, and the impacts of tech adoption will become much

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30 Jun 2025 21:28, UTC

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more pronounced in the upcoming decade. Tech investments are increasing rapidly, with leading banks allocating as much as 20% of their noninterest expenses on technology-related spending. While tech spending varies significantly across banks, investing in core enabling tech like digitization has become a key requirement. The bottom line: Fintechs will limit their share to particular areas within banking, and we are skeptical of the argument that these firms will disrupt legacy banking through their superior technological prowess, given the high barriers to success and heavy tech investments by incumbents in recent years. There are competing arguments related to the impact of tech adoption on banks. One dominant view is that tech adoption should improve the efficiency of the entire banking industry thereby improving profits for everyone. We believe that tech adoption will improve efficiency but most of the benefits would be passed on to consumers in the long run. There would certainly be winners and losers in this race. We argue that economies of scale and scope are more important than ever for banks in this era. Big picture: We have tried to identify banks best positioned to leverage their tech capabilities to improve their efficiency and gain market share over the next decade. Bank of America and U.S. Bancorp are our preferred picks given their technological readiness and current valuation.

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

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 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.

# Citigroup Inc C ★★

30 Jun 2025 21:28, UTC

| Last Price               | Fair Value Estimate                | Price/FVE | Market Cap                    | Economic Moat™ | Equity Style Box | Uncertainty | Capital Allocation | ESG Risk Rating Assessment <sup>1</sup>  |
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## 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.

## 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

# Citigroup Inc C ★★

30 Jun 2025 21:28, UTC

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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

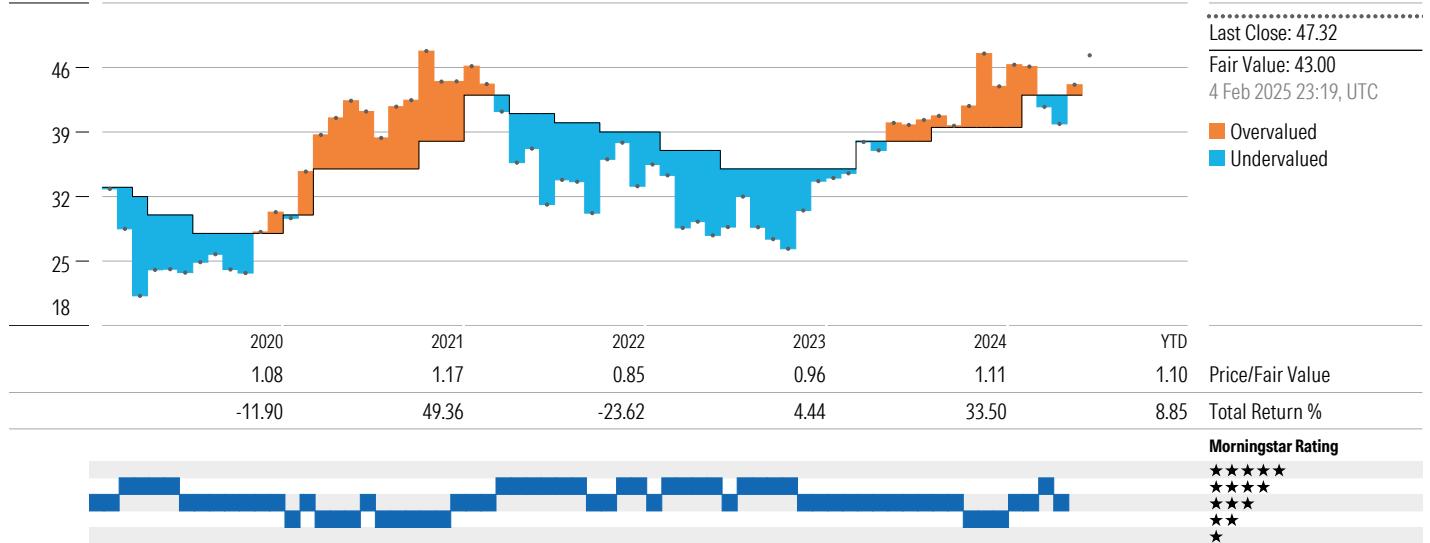
We think that the election of Donald Trump and Republican control of both the Senate and the House bring mostly tailwinds to the US banking industry. We will adjust our valuation models as the incoming government's policies solidify, but with a rally of over 10% for many US banks after the Nov. 5 election 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 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 Inc C ★★

30 Jun 2025 21:28, UTC

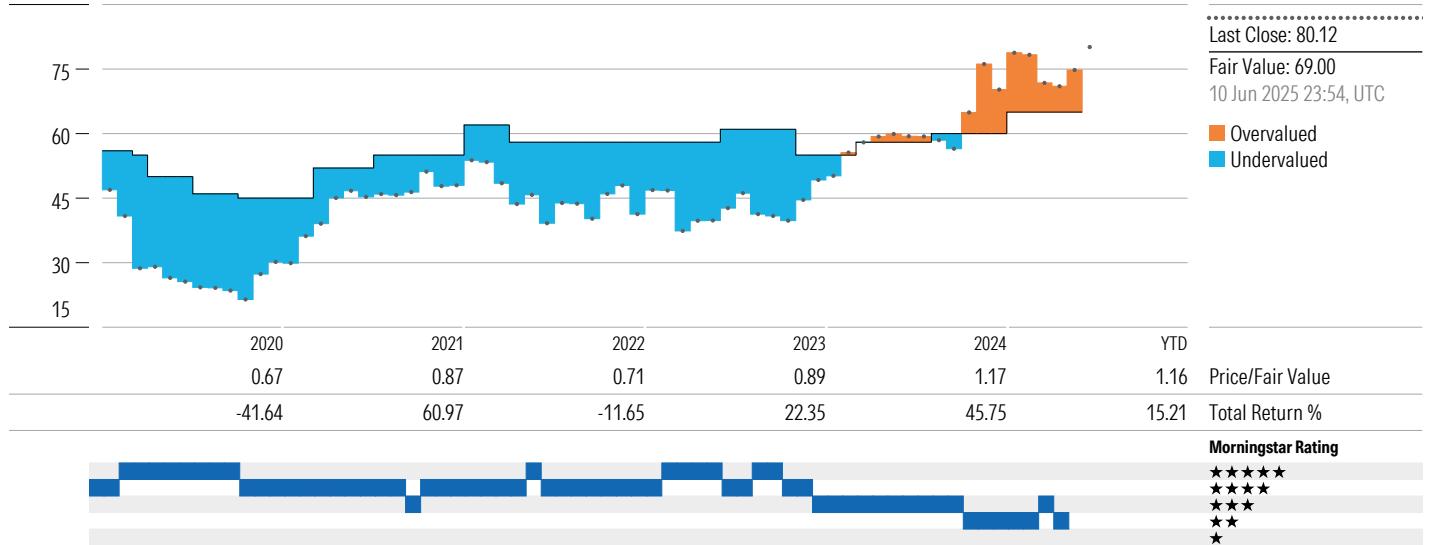
## Competitors Price vs. Fair Value

### Bank of America Corp BAC



Total Return % as of 30 Jun 2025. Last Close as of 30 Jun 2025. Fair Value as of 4 Feb 2025 23:19, UTC.

### Wells Fargo & Co WFC



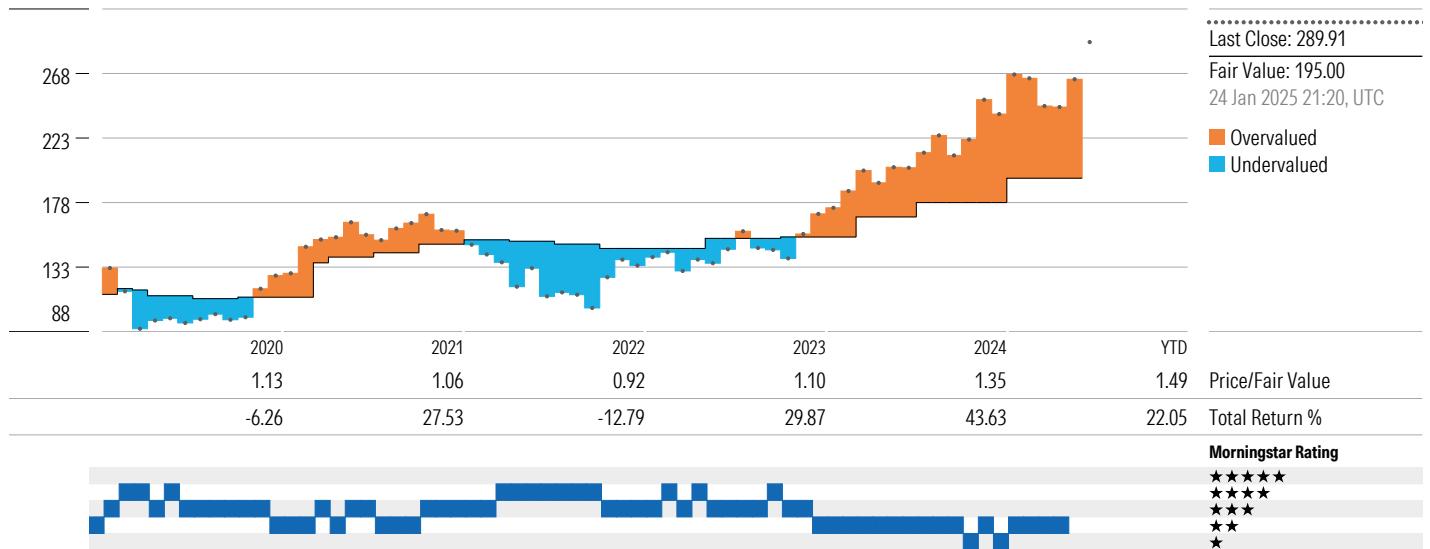
Total Return % as of 30 Jun 2025. Last Close as of 30 Jun 2025. Fair Value as of 10 Jun 2025 23:54, UTC.

# Citigroup Inc C ★★

30 Jun 2025 21:28, UTC

## Competitors Price vs. Fair Value

JPMorgan Chase & Co JPM



Total Return % as of 30 Jun 2025. Last Close as of 30 Jun 2025. Fair Value as of 24 Jan 2025 21:20, UTC.

# Citigroup Inc C ★★

30 Jun 2025 21:28, UTC

| Last Price               | Fair Value Estimate                | Price/FVE | Market Cap                    | Economic Moat™ | Equity Style Box | Uncertainty | Capital Allocation | ESG Risk Rating Assessment <sup>1</sup>  |
|--------------------------|------------------------------------|-----------|-------------------------------|----------------|------------------|-------------|--------------------|--|
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## Morningstar Valuation Model Summary

### Financials as of 04 Feb 2025

|   | Actual |        |        | Forecast |        |        |        |        |
|---|--------|--------|--------|----------|--------|--------|--------|--------|
|   | 2022   | 2023   | 2024   | 2025     | 2026   | 2027   | 2028   | 2029   |
| Fiscal Year, ends 31 Dec                              |        |        |        |          |        |        |        |        |
| 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 |      |      |      |      |      |
|-------------------------|------------|------|------|----------|------|------|------|------|------|
|                         | 3 Year Avg | 2022 | 2023 | 2024     | 2025 | 2026 | 2027 | 2028 | 2029 |
| 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 | 64.2 |
| 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 |      |      |      |      |            |
|--------------------------------------|------------|-------|-------|----------|------|------|------|------|------------|
|                                      | 3 Year Avg | 2022  | 2023  | 2024     | 2025 | 2026 | 2027 | 2028 | 5 Year Avg |
| 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 | 11.0     | 10.9 | 10.7 | 10.4 | 9.2  |
| Price/Book          | —      | —    | —    | —        | —    | —    | —    | —    |
| Price/Tangible Book | 0.6    | 0.6  | 0.8  | 0.9      | 0.9  | 0.8  | 0.8  | 0.7  |
| Dividend Yield %    | 4.0    | 3.1  | 2.6  | 3.2      | 3.2  | 3.3  | 3.4  | 3.8  |
| 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

|                             | Actual |      |      | Forecast |      |      |      |      |
|-----------------------------|--------|------|------|----------|------|------|------|------|
|                             | 2022   | 2023 | 2024 | 2025     | 2026 | 2027 | 2028 | 2029 |
| Fiscal Year, ends 31 Dec    |        |      |      |          |      |      |      |      |
| 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 ★★

30 Jun 2025 21:28, UTC

| Last Price               | Fair Value Estimate                | Price/FVE | Market Cap                    | Economic Moat™ | Equity Style Box | Uncertainty | Capital Allocation | ESG Risk Rating Assessment <sup>1</sup>   |
|--------------------------|------------------------------------|-----------|-------------------------------|----------------|------------------|-------------|--------------------|---|
| 85.12 USD<br>30 Jun 2025 | 75.00 USD<br>5 Feb 2025 00:36, UTC | 1.13      | 158.98 USD Bil<br>30 Jun 2025 | None           | Large Value      | Medium      | Standard           |  4 Jun 2025 05:00, UTC |

| Financial Leverage (Reporting Currency)  | Actual      |         |        | Forecast    |         |        |             |         |                |
|--|-------------|---------|--------|-------------|---------|--------|-------------|---------|----------------|
|  | 2022        | 2023    | 2024   | 2025        | 2026    | 2027   | 2028        | 2029    |                |
| Fiscal Year, ends 31 Dec   |             |         |        |             |         |        |             |         |                |
| Equity/Assets %  | 8.3         | 8.5     | 8.9    | 8.9         | 8.8     | 8.7    | 8.6         | 8.5     |                |
| <b>Forecast Revisions</b> as of  | <b>2025</b> |         |        | <b>2026</b> |         |        | <b>2027</b> |         |                |
| 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   |             |         |                |
| <b>Key Valuation Drivers</b> 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 <a href="https://pitchbook.com/">https://pitchbook.com/</a> . |             |         |        |             |         |        |             |         |                |
| <b>Discounted Cash Flow Valuation</b> as of 04 Feb 2025  |             |         |        |             |         |        |             |         | <b>USD Mil</b> |
| 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>   |

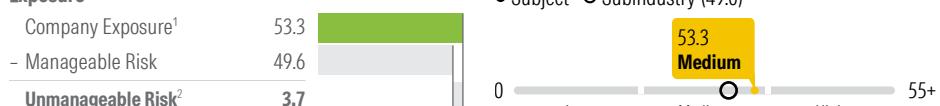
# Citigroup Inc C ★★

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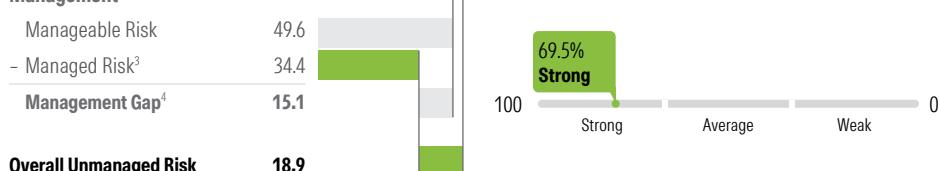
## ESG Risk Rating Breakdown

### Exposure



- 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



- 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 69.5% 4. Management Gap assesses risks that are not managed, but are considered manageable 5. ESG Risk Rating Assessment = Overall Unmanaged Risk + Unmanageable Risk

## ESG Risk Rating Assessment⁵



ESG Risk Rating is of Jun 04, 2025. Highest Controversy Level is as of Jun 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/](https://sustainalytics.com/esg-ratings/).

## Peer Analysis 04 Jun 2025

| Company Name         | Exposure      | Management     | ESG Risk Rating |
|----------------------|---------------|----------------|-----------------|
| <b>Citigroup Inc</b> | 53.3   Medium | 69.5   Strong  | 18.9   Low      |
| Bank of America Corp | 53.0   Medium | 59.1   Strong  | 23.8   Medium   |
| Wells Fargo & Co     | 58.6   High   | 45.6   Average | 33.7   High     |
| JPMorgan Chase & Co  | 53.7   Medium | 52.9   Strong  | 27.3   Medium   |
| –                    | –   –         | –   –          | –   –           |

## Appendix

### Historical Morningstar Rating

#### Citigroup Inc C 30 Jun 2025 21:28, 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 30 Jun 2025 21:29, 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 |
| ★★★      | ★★★      | ★★★      | ★★★      | ★★★      | ★★★      | ★★★      | ★★★      | ★★★      | ★★★      | ★★★      | ★★★      |

#### Wells Fargo & Co WFC 30 Jun 2025 21:30, 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 |
| ★★★★★    | ★★★★★    | ★★★★★    | ★★★★★    | ★★★★★    | ★★★★★    | ★★★★★    | ★★★★★    | ★★★★★    | ★★★★★    | ★★★★★    | ★★★★★    |

**JPMorgan Chase & Co** JPM 30 Jun 2025 21:26, UTC

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

# 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, 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 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

## Morningstar Equity Research Star Rating Methodology



# Research Methodology for Valuing Companies

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

Our recommended margin of safety—the discount to fair value demanded before we'd recommend buying or selling the stock—widens as our uncertainty of the estimated value of the equity increases. The more uncertain we are about the potential dispersion of outcomes, the greater the discount we require relative to our estimate of the value of the firm before we would recommend the purchase of the shares. In addition, the Uncertainty Rating provides guidance in portfolio construction based on risk tolerance.

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

## Margin of Safety

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

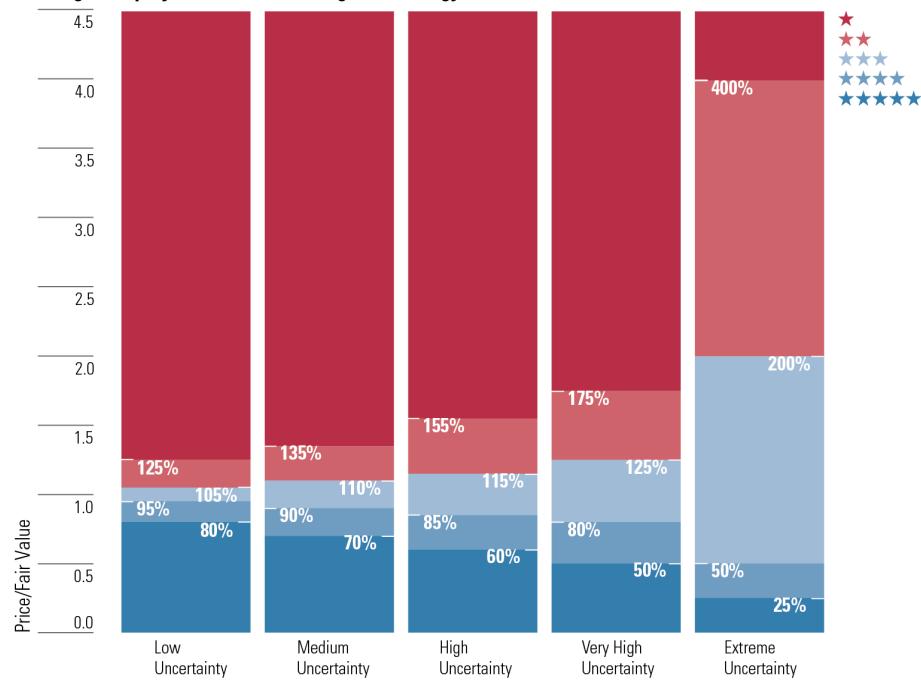
Our uncertainty rating is based on the interquartile range, or the middle 50% of potential outcomes, covering the 25th percentile–75th percentile. This means that when a stock hits 5 stars, we expect there is a 75% chance that the intrinsic value of that stock lies above the current market price. Similarly,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

## 4. Market Price

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

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

## Morningstar Equity Research Star Rating Methodology



## Morningstar Star Rating for Stocks

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

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

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

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

The Morningstar Star Ratings for stocks are defined below:

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

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

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

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

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

## Other Definitions

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

**Capital Allocation Rating:** Our Capital Allocation (or Stewardship) Rating represents our assessment of the quality of management's capital allocation, with particular emphasis on the firm's balance sheet, investments,

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

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

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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.

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