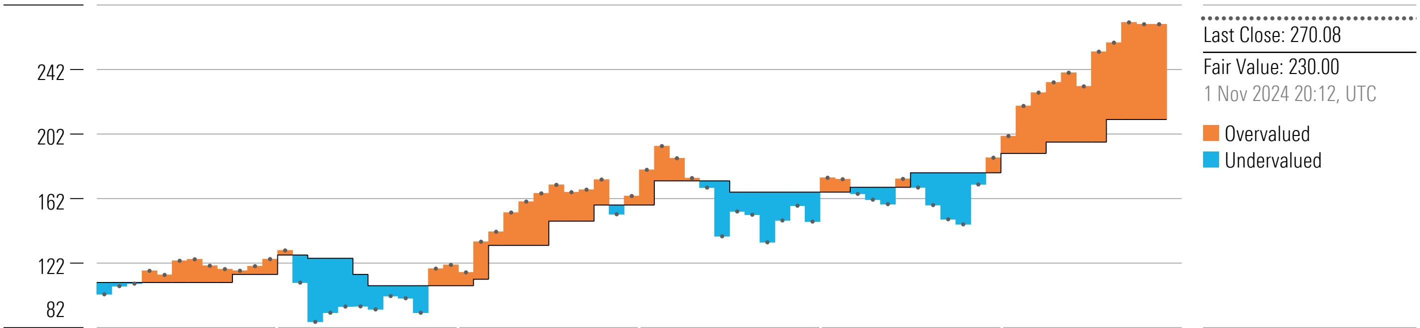
Morningstar Equity Analyst Report | Report as of 2 Nov 2024 04:32, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC.   Page 1 of 23

American Express Co AXP ★★ 1 Nov 2024 21:40, UTC

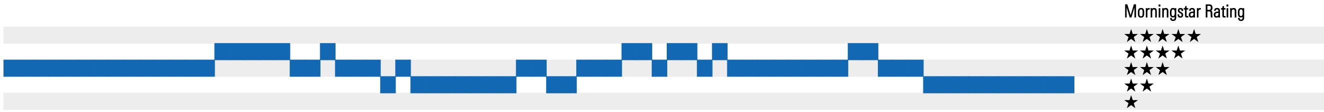
Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
270.08 USD 31 Oct 2024	230.00 USD 1 Nov 2024 20:12, UTC	1.17	193.86 USD Bil 1 Nov 2024	Wide	Large Blend	Medium	Standard	2 Oct 2024 05:00, UTC

Price vs. Fair Value



	2019	2020	2021	2022	2023	YTD	
	1.08	1.12	1.04	0.89	1.05	1.17	Price/Fair Value
	32.28	-1.49	36.73	-8.47	28.37	45.61	Total Return %

Morningstar Rating



Total Return % as of 31 Oct 2024. Last Close as of 31 Oct 2024. Fair Value as of 1 Nov 2024 20:12, UTC.

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

American Express: Increasing Our Fair Value Estimate

Analyst Note Michael Miller, CFA, Equity Analyst, 1 Nov 2024

Returning to wide-moat-rated American Express following earnings, we are increasing our fair value estimate to $230 from $211, a larger adjustment than we had initially expected. Around $5 of the positive adjustment comes from earnings since our last update while another $2 comes from slightly higher net interest income assumptions.

The remaining increase comes from higher net card fees, the annual fees American Express charges for its premium fee-based credit cards, partially offset by high member reward and service spending. While card fees are only American Express' third largest source of revenue, the firm's success here has made it a relevant source of growth, with card fee revenue increasing at an average rate of 16% from 2018 to 2023.

A major force behind the rapid growth is American Express' product refreshes, where the firm typically adds new benefits to a card product while also raising the fee to match the new rewards program. With the company's average fee per card at $105 in the third quarter of 2024, up from $75 three years ago, this provides a major tailwind to growth over time. Given that American Express has recently increased the price of its US consumer gold card, the benefit of which should flow through the firm's income statement over the next year, we expect net card fees to continue to grow in the double digits for the immediate future and now project a CAGR of 12.2% over the next five years.

Business Strategy & Outlook Michael Miller, CFA, Equity Analyst, 2 Aug 2024

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Sector	Industry
Financial Services	Credit Services

Business Description

American Express is a global financial institution, operating in about 130 countries, that provides consumers and businesses charge and credit card payment products. The company also operates a highly profitable merchant payment network. Since 2018, it has operated in three segments: global consumer services, global commercial services, and global merchant and network services. In addition to payment products, the company's commercial business offers expense management tools, consulting services, and business loans.

American Express has enjoyed several years of accelerated growth as the company's payment volume benefited from a recovery in travel and entertainment spending while growing momentum with younger demographics drove record new card acquisitions. American Express' shift toward a younger cardholder base has also supported significant loan growth, with net interest income increasing more than 69% from 2021 to 2023. That said, American Express still generates more than 75% of its revenue through noninterest income, with its largest source of revenue being the discount rate charged to merchants when they accept payments. This means that the level of consumer spending has a direct impact on the company's revenue.

A point of concern for American Express has been if economic pressure would impact consumer spending. So far, spending on the company's cards has remained surprisingly resilient, with average total spending per card continuing to rise in 2023. While consumer spending remains solid, this will still be a point to monitor as American Express is more reliant on discretionary spending levels than its other card-issuing peers. While the company has become more diversified, travel and entertainment spending still accounted for 25% of total billed volume in 2023. Moreover, the company's commercial card business, which accounted for around 23% of 2023 volume, has shown more signs of pressure, with spending volume growth falling to very low-single digits in 2024.

The company’s greatest strength remains its existing cardholder base of high-spending individuals and small businesses. The high average spending rate on American Express' cards makes its cardholders attractive to merchants, and the company has been able to form valuable partnerships in exchange for access to these cardholders. We anticipate that this will continue as American Express' position in the premium credit card market has only gotten stronger in recent years, with the size of its cardholder base growing in the mid-single digits as the company's efforts to reposition its products as premium lifestyle cards bear fruit.

Bulls Say Michael Miller, CFA, Equity Analyst, 1 Nov 2024

- American Express operates as a closed-loop network for the cards that it issues. This allows it to capture more of the economic profit of a single credit card payment than other credit card issuers.
- American Express has found considerable success in growing its net interest income in recent years, enjoying better loan growth and lower credit costs than its peers.
- American Express' efforts to reposition its cards as lifestyle products for younger cardholders has been a success and new card acquisition has risen significantly.

Bears Say Michael Miller, CFA, Equity Analyst, 1 Nov 2024

- American Express operates with a narrower scope than many of its competitors, offering fewer deposit and lending products than other credit card issuers.
- Despite much improved acceptance rates in the US, the company still trails other payment networks in international acceptance rates.

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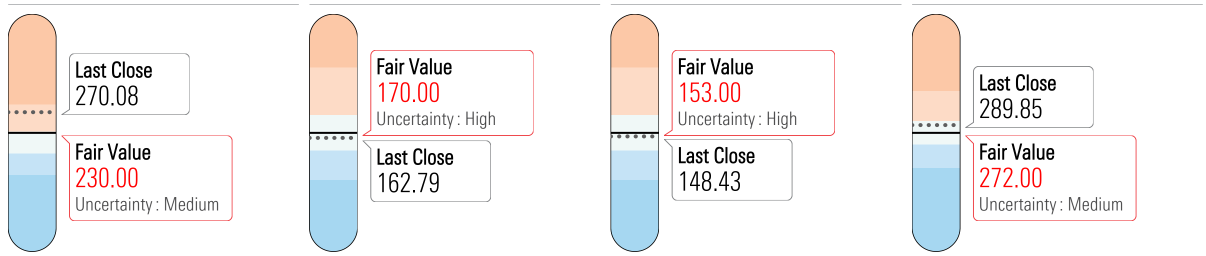
Competitors



	American Express Co AXP	Capital One Financial Corp COF	Discover Financial Services DFS	Visa Inc Class A V
Economic Moat	Wide	Narrow	Narrow	Wide
Currency	USD	USD	USD	USD
Fair Value	230.00 1 Nov 2024 20:12, UTC	170.00 31 Jul 2024 20:40, UTC	153.00 30 Jul 2024 21:39, UTC	272.00 13 Jun 2024 19:34, UTC
1-Star Price	310.50	263.50	237.15	367.20
5-Star Price	161.00	102.00	91.80	190.40
Assessment	Overvalued 1 Nov 2024	Fairly Valued 1 Nov 2024	Fairly Valued 1 Nov 2024	Fairly Valued 1 Nov 2024
Morningstar Rating	★★1 Nov 2024 21:40, UTC	★★★1 Nov 2024 21:41, UTC	★★★1 Nov 2024 21:44, UTC	★★★1 Nov 2024 21:46, UTC
Analyst	Michael Miller, Equity Analyst	Michael Miller, Equity Analyst	Michael Miller, Equity Analyst	Brett Horn, Senior Equity Analyst
Capital Allocation	Standard	Standard	Standard	Standard
Price/Fair Value	1.17	0.96	0.99	1.07
Price/Sales	3.04	1.64	2.18	16.42
Price/Book	6.46	0.99	2.34	14.81
Price/Earning	20.45	15.37	11.90	28.84
Dividend Yield	0.99%	1.46%	1.85%	0.72%
Market Cap	193.86 Bil	62.59 Bil	37.99 Bil	565.74 Bil
52-Week Range	148.33—286.36	101.38—167.93	81.61—157.06	239.20—296.34
Investment Style	Large Blend	Large Value	Mid Blend	Large Blend

- A weaker economy would be a major headwind on American Express' spend-centric business model, with the company's commercial cards already showing signs of deceleration.

Economic Moat Michael Miller, CFA, Equity Analyst, 2 Aug 2024

In our view, American Express has a wide Morningstar Economic Moat Rating. We believe its differentiated operating model has allowed it to build maintainable competitive advantages that will allow the firm to continue to generate returns on equity well above its cost of capital for the foreseeable future. American Express operates as a closed-loop network for payments made by its cardholders. This means that American Express issues the credit card to the consumer, operates the payment network, and establishes a direct relationship with the merchant. By operating as a closed-loop network, American Express can capture the full economic profit from a single credit card payment. As a result, it generates most of its revenue from discount revenue and card fees, with noninterest income making up roughly 80% of its revenue, unlike other credit card issuers that typically rely heavily on net interest income. Not being as reliant on interest income helps allow American Express to build a strong competitive position in credit cards for high-income individuals and businesses as both groups are less likely to maintain large outstanding balances on their cards. American Express' strength in these spaces has allowed it to remain effectively tied with Chase as the largest credit card issuer in the US by purchase volume. American Express' strength in these market segments, as well as the extra revenue from its global merchant and network services segment, should allow it to continue to enjoy returns on equity above its cost of capital for the foreseeable future.

While a small portion of the firm's total revenue, GMNS plays a key role in American Express' strategy as it houses the company's network business. Though it is reported as a separate business line, GMNS is closely tied to the other segments as it represents the revenue American Express earns by transmitting and processing the payments of its cardholders through the company's network. In order for a network to convince merchants that they should accept its payments, the network needs to have enough users to encourage acceptance. But until a network has broad acceptance, it is difficult to attract users to its platform, making it difficult for new competitors to enter the market. Additionally, credit card networks have become deeply entrenched in US retail payments due to the reward structures that come attached to credit cards. While smaller than Visa or Mastercard, American Express' network has historically been able to charge rates that match or even exceed its larger rivals' due to the higher spending rates on the company's consumer cards and its strong competitive positioning in commercial payments. Additionally, the costs of running a network are mostly fixed, so incremental revenue from additional purchase volume drops directly to the network's bottom line, further advantaging existing networks over potential entrants that would not benefit from scale.

Outside of American Express' network business, the company shows signs of a moat in its credit card issuing business on both the consumer and the commercial sides. A key feature of American Express' consumer credit cards segment is the high average spending rate on its cards and the bias toward travel and entertainment spending. Both are a consequence of the company's historical branding as well as the current reward and fee structure on its front-line cards that favor cardholders that travel frequently and live in urban environments. Premium fee-paying reward cards attract cardholders with higher income; in 2019, the average American Express cardholder spent more than $14,200 on their card, well above the average for a Visa or Mastercard cardholder. This high-spending cardholder base is highly attractive to merchants, and American Express has historically been able to gain concessions from merchants in exchange for access to its cardholders—especially in the travel and entertainment industries, where its spending is concentrated. Historically, this came in the form of charging merchants higher discount rates for purchases made with its cards, particularly those in the travel and entertainment industry. American Express also benefits from forming partnerships with key retailers to provide its cardholders with unique benefits in exchange for steering its cardholders to those businesses. For example, the company's Fine Hotels + Resorts program offers a hotel booking service on

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American Express' website and mobile app that gives the company's premium cardholders discounts on hotel rooms and other special benefits, but the service only lists hotels that have agreed to be part of American Express' platform. This creates a network effect as the value for a hotel chain to join the platform is tied to the number of users, while the value provided to the users is tied to the number of hotels on the platform. The company has a similar program for flights and the partnerships that American Express forms can be long lasting and extend beyond just bookings. The company has worked with Delta for decades, and the airline markets multiple cobranded credit cards with American Express. These travel and entertainment benefits help the company avoid competing strictly on reward point generation since benefits like late checkout and airport lounge access cannot be directly compared with rewards points generated on other cards. These partnerships also help defray

the cost of generous rewards and benefits offered by American Express' premium cards. This makes it difficult for new premium credit cards to enter American Express' market since without a preexisting cardholder base that is attractive to merchants, they will need to compete with American Express' benefits programs without support.

While American Express has competitive advantages in its global consumer services segment, its competitive position in commercial services is stronger. Both as a credit card issuer and as a credit card network, the company has a larger market share on the commercial side of the credit card industry than it does on the consumer side. In 2019, American Express' network accounted for 14% of US consumer credit card purchases; that same year American Express' network carried 35% of commercial purchases, putting it in second place behind Visa for commercial credit card payments. American Express' strength in the commercial space is driven by its success in becoming the card of choice for small- and medium-sized enterprises, which represent about 75% of its commercial business, a success that is driven by its fully integrated operating model. On its primary fee-paying business cards, American Express offers its SME cardholders revolving debt with no preset spending limit. In practice, the major draw of American Express' cards over its competitors' offerings is that they have line sizes that are several times larger. In order to offer its cardholders these larger lines, the firm controls its risk by adjusting the exact line size proactively based on spending patterns and payment history of the cardholder as well as requiring monthly payment. This structure requires access to the data necessary to drive the firm's credit models as well as a business strategy that is not reliant on net interest income. The company's cards present a highly attractive value proposition to a small business since they are a payment method, a cheap line of credit with a large spending limit, and generate reward points all in a single package. This creates switching costs because if a cardholder decides to change cards they will be forced to find an alternative source of financing for their day-to-day expenses. The consequence of this structure is that global commercial services generates very little in the way of interest, with net interest income representing less than 10% of revenue for the segment. Because American Express has its own network, it can compensate for the lack of interest payments by capturing more value from each dollar spent with its cards; competitors do not have this advantage.

Fair Value and Profit Drivers Michael Miller, CFA, Equity Analyst, 1 Nov 2024

We are increasing our fair value estimate for American Express to $230 from $211, which translates to 16.6 times our projected 2024 earnings. Around $5 of the positive adjustment comes from earnings since our last update while another $2 comes from slightly higher net interest income assumptions. The remaining increase comes from higher net card fees, the annual fees American Express charges for its premium fee-based credit cards, partially offset by high member reward and service spending.

We project credit costs to increase further in 2024 from 2023, as net charge-offs normalize from their 2021 lows during a period of economic uncertainty. Additionally, we expect credit losses to become modestly elevated in 2024 as the economy faces pressure from higher interest rates and as consumer debt levels increase. We expect American Express to be adequately provisioned, though we note American Express has been significantly expanding the size of its loan book, which will require higher provisioning due to growth.

While we do project strong net interest income growth for American Express in 2024, this is primarily a function of growing loan balances and not widening net interest margins, as rates begin to fall in 2024. We do expect loan growth to slow from its breakneck rates in 2023 and 2022, but changes to the structure of American Express' card products as well as its high rate of cardholder growth have provided the bank's lending business with meaningful tailwinds. As a result, we do expect American Express' loan growth to outpace its peers in the medium term, leading to a net interest income CAGR of 7.3% from 2023 to 2028.

We expect discount revenue to increase in the mid to high-single digits in 2024. We expect this to be driven more by cardholder base growth, as the company benefits from the impressive cardmember acquisition numbers it achieved in 2023, than from higher spending per card. We see weakening economic conditions acting as a headwind to spending per card in 2024, particularly for its commercial cards. In the medium term, we expect the company to generate high-single-digit discount revenue growth in 2025 and beyond. Additionally, we expect the firm's card fee income to enjoy another year of double-digit growth in 2024, as the company continues to enjoy strong momentum in its premium card business, before decelerating down to the high-single digits.

We project American Express’ membership reward expense to grow faster than the company’s noninterest income in the long term. The credit card market remains competitive, and cardmember reward programs have become more generous over time as companies seek to attract new cardholders. While the intensity of new reward offers from its competitors has slackened from its peak, the overall trend of increasing rewards remains in place, and American Express will need to follow in order to stay relevant. American Express' cost structure does benefit from fixed cost leverage as spending on its cards increases; however, historically the benefit of this leverage has simply been returned to its cardholders in the form of more generous reward programs. As a result, we expect American Express' operating margin to be stable over time, ending 2028 at 20.4%.

Risk and Uncertainty Michael Miller, CFA, Equity Analyst, 2 Aug 2024

We assign American Express a Medium Morningstar Uncertainty Rating. American Express faces risks from intense competition in the payments segment, including competing against the largest payment networks in the world, such as Visa and Mastercard, while also simultaneously competing against the some of the largest credit card providers in the world, such as JPMorgan, Citigroup, and Bank of America.

American Express differs from normal bank issuers of credit cards in that less than 25% of its revenue comes from net interest income and its net charge-offs are small relative to the size of the firm. This leaves American Express substantially less exposed to credit and interest-rate cycles, though these do remain considerations for the firm. On the other hand, the firm’s revenue is heavily influenced by spending volume, both from consumers and business, which can rise and fall based on macroeconomic factors. Also, a disproportionate amount of the company's revenue comes from travel and entertainment, which are historically considered luxuries. This means economic pressure could potentially squeeze the ability of the bank's cardholders to spend on travel or other luxury goods, causing spending volume on American Express' cards to fall more than its peers. That said, we note that the firm's affluent cardholder base is less impacted by economic pressure than the average consumer.

American Express faces very limited environmental, social, and governance risk. Credit cards often carry inherent product risk due to their high interest rates, which have the potential to trap customers into a cycle of debt. However, American Express' business model favors discount revenue—the fees charged to merchants when cardholders use their cards—over net interest income. With about 24% of the company's revenue coming from interest, regulatory action on credit card lending practices would have limited impact on American Express.

Capital Allocation Michael Miller, CFA, Equity Analyst, 2 Aug 2024

We give American Express a Standard Morningstar Capital Allocation Rating. The company has a strong balance sheet with a common equity Tier 1 capital ratio of 10.8% at the end of June 2024. While we do expect net charge-offs to be higher in 2024 than in 2023, we believe that the strength of American Express' balance sheet will see it through with few difficulties. This is particularly true given that the company has typically seen lower net charge-off rates than other credit card issuers due to the nature of its cardholder base. This credit cycle has not been a exception, with American Express' credit costs normalizing at a noticeably slower rate than its peers.

The company has historically had an appropriate, if not somewhat conservative, distribution policy. Unlike some of its competitors, American Express was able to keep its dividend unchanged throughout 2020, despite the impact the pandemic had on its cash flow. While the company has a relatively low payout ratio, this makes sense, given the cyclical nature of credit cards and the effect that changes in economic activity can have on the company. The company has also shown a clear willingness to make use of share buybacks to return value to shareholders when it finds itself with excess capital on its balance sheet, with the company buying back around 7% of its outstanding shares in 2022.

American Express has historically been a modest but consistent investor of capital, both in inorganic acquisitions and organic investments back into its business. Rather than make large transformational acquisitions, the company has typically preferred to make smaller bolt-on purchases to offer specific new services to its existing cardholders, like Resy, a restaurant booking and analytics service, in 2019. While the company has certainly not damaged its financial position with its investment strategy, many of these acquisitions are too small or niche to move the needle for the bottom line. That said, recently the company has been building up its position in small-business services and business-to-business payments. While it remains to be seen if the company can turn this into a material source of revenue, we view these investments favorably as they leverage the firm’s already strong position with small businesses in America.

Analyst Notes Archive

American Express Earnings: Strong Net Interest Income Drives High-Single-Digit Revenue Growth

Michael Miller, CFA, Equity Analyst, 18 Oct 2024

Wide-moat-rated American Express reported decent third-quarter earnings as strong net interest income growth helped offset slower discount revenue growth. Net revenue increased 8% from last year's period, while earnings per share increased to $3.49 from $3.30 in the third quarter of 2023. As we incorporate these results, we do not expect to materially alter our $211 per share fair value estimate for American Express. Despite strong business results in 2024, we see the firm's shares as meaningfully overvalued following an impressive run the past 12 months.

Discount revenue—the transaction fees American Express charges merchants when they accept its cards—was a drag on top-line growth, increasing just 4% from last year to $8.8 billion. The firm's commercial cards were a major culprit, with total spending volume rising only 1% from last year. Spending from the company's international and US consumer cardholders was stronger, though, increasing 13% and 6%, respectively, during the quarter. American Express' commercial card performance has been unimpressive for some time, with rapid net interest and net card fee income growth offsetting the problem.

Spending volume growth was, however, driven primarily by new-card growth, with the number of proprietary cards outstanding increasing 4% year over year to 82.9 million. We generally value cardholder growth over increases in average per card spending, as the value of cardholder growth extends beyond higher discount revenue. Moreover, a growing premium cardholder base creates a virtuous cycle for American Express as an increasingly larger affluent cardholder base encourages the firm's merchant partners to offer benefits to its cardholders. This makes it easier for the company to further expand its cardholder base. The cardholder expansion also powered the 18% year-over-year increase in American Express' net card fee revenue, as card member growth has been disproportionately weighted toward cards with premium fees.

Opportunity in Credit Card Issuers Despite High Charge-Offs Michael Miller, CFA, Equity Analyst, 20 Aug 2024

Net charge-offs for the credit card issuers have risen significantly so far in 2024, continuing an ongoing trend from 2023. Questions about credit conditions have become a repeated feature of conversations with management teams, and many have focused on the topic as a lens into the financial health of the United States consumer.

While we do think some of the fears surrounding credit card defaults are overstated, it is true that both net charge-offs and delinquencies are now solidly above normal levels. The risk of higher credit losses is a common concern for credit card issuers, as it most distinguishes this business from other forms of lending. Credit card receivables are highly lucrative, with interest rates on credit card debt ranging from the midteens to as high as 30%, allowing firms in this part of the banking industry to enjoy net interest margins and returns on equity far above peers'.

That said, we expect credit costs to plateau in the second half of 2024. However, they should remain modestly elevated in 2025 and into 2026 as the impact of tighter underwriting offsets rising unemployment. There are already signs of improvement as delinquency rates, a leading indicator for net charge-offs, have performed well industrywide in 2024.

When looking at valuations on a full-cycle basis, we still see opportunity in the sector, with Capital One Financial as our preferred name, as it trades well below our fair value estimate. We still see American Express as the most competitively advantaged firm in our coverage. Still, it trades at a premium to our fair value estimate, and the high expectations implied make it less attractive to us. Meanwhile, Bread Financial and Synchrony Financial’s weaker credit and lack of noninterest revenue make them more sensitive to credit losses if economic conditions deteriorate more than expected.

American Express Earnings: Net Interest Income and Card Fees Drive Double-Digit Net Income Growth Michael Miller, CFA, Equity Analyst, 19 Jul 2024

Wide-moat-rated American Express reported strong second-quarter earnings as it benefited from strong net interest income growth and the sale of Accertify. Net revenue increased 8% from last year and 3.4% from last quarter to $16.3 billion. Earnings per share increased 44% to $4.15, or 21% to $3.49 when excluding the gain on sale from Accertify. As we incorporate these results, we do not expect to materially alter our $197 fair value estimate. We see the shares as modestly overvalued.

While we generally view American Express as a payment network first and a lender second, net interest income has been a major source of growth in recent years as the company's loan growth outpaces that of the broader industry. The second quarter continued this trend, with net interest income rising 20% year over year to $3.7 billion, though this was a small sequential decrease from last quarter. The year-over-year increase was due to both net interest margin expansion and loan growth, with period-end cardmember loans increasing 14% from last year to $130.9 billion. That said, net interest income growth is clearly decelerating from the more than 30% annual growth rates seen last year. This was expected, but American Express will need faster noninterest revenue growth to compensate if it wants to achieve its revenue growth targets.

Discount revenue--the transaction fees American Express charges merchants when they accept its cards--ended a series of weak quarters, increasing 4% from last year but 5.7% sequentially to $8.9 billion. International cardholders and US consumers remain the driving force behind American Express' results, with spending volume increasing 13% and 6%, respectively. Spending volume growth was supported by strong new card applications; the firm acquired 3.3 million new cards during the quarter. This led to a 4% increase in the number of proprietary cards outstanding to 82.1 million.

American Express Earnings: Interest Income Drives Continued Rapid Earnings Growth Michael Miller, CFA, Equity Analyst, 19 Apr 2024

Wide-moat American Express reported strong first-quarter earnings as it benefited from impressive net interest income growth and well-controlled expenses. Net revenue increased 11% from last year to $15.8 billion, while earnings per share increased 39% to $3.33. These results translate to a return on average equity of 33.4%. As we incorporate these results, we do not plan to materially alter our $190 fair value estimate.

Unlike other credit card issuers, American Express is a payment network first and lender second, as noninterest income historically has made up around 80% of total revenue. However, during the last few years, an increased focused on lending as well as its shift toward younger cardholders has led to accelerated interest income growth. The first quarter continued this trend, with net interest income increasing 26% year over year to $3.8 billion. This growth was due to net interest margin expansion and loan growth, with period-end cardmember loans increasing 16% to $126.6 billion. As expected, net interest income growth is beginning to decelerate as the more than 30% annual growth rates the bank saw last year could not continue. However, the firm has maintained its momentum for longer than we had anticipated, and lending remains a major growth driver.

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Discount revenue—the transaction fees American Express charges merchants when they accept its cards and the firm's largest source of revenue—increased 5% from last year to $8.4 billion. Once again, international cardholders and US consumers were the driving force behind American Express' results, with spending volume increasing 13% and 8%, respectively. Spending volume growth was supported by a reacceleration in new card applications to 3.4 million, which helped drive a 4% increase in proprietary cards outstanding to 81.1 million. Solid cardholder growth helped offset a relatively modest increase in per card spending of only 2%.

American Express: Following Earnings We Are Increasing Our Valuation to $190 From $178 Michael Miller, CFA, Equity Analyst, 29 Jan 2024

Returning to American Express following earnings, we are increasing our fair value estimate for American Express by 7% to $190 from $178. Our new fair value estimate translates to 14.8 times our projected 2024 earnings.

Around $5 of the positive adjustment comes from higher net interest income projections as the bank's loan growth outpaced our expectation in 2023, with card member loans increasing by 17%. That said, we still expect net interest income growth to decelerate in 2024, as the degree to which loan growth has outpaced cardholder growth is not maintainable indefinitely. Additionally, with interest rates expected to fall in 2024, the bank will likely face downward pressure on its net interest margin in 2024. That said, the bank's momentum in lending has proven more resilient than we had expected, particularly as its credit results have remained stronger than those of its peers despite the accelerated growth. With net charge-offs still below normal levels, there is no sign that American Express' shift toward a younger demographic has had an impact on its historically strong credit quality.

Roughly $5 of the increase comes from earnings since our last update. The remaining $2 comes from lower expense projections, as 2023 operating expenses came in modestly below our expectations. Operating expenses rose 10% during the year, with marketing spending in particular decreasing 4% to $5.2 billion. Despite the beat, we still expect American Express to spend aggressively on rewards and marketing as the premium card space remains highly competitive, with new competing products being launched in 2023.

American Express Earnings: Net Interest Income Drives Another Quarter of Double-Digit Revenue Growth Michael Miller, CFA, Equity Analyst, 26 Jan 2024

Wide-moat American Express reported solid fourth-quarter 2023 earnings that were roughly in line with our expectations as strong net interest income more than offset slow spending growth on the company's commercial cards. Net revenue increased 11% from last year and 2.7% from last quarter to $15.8 billion, and net income increased 23% from last year to $1.9 billion. As we incorporate these results, we expect to increase our $178 per-share fair value estimate by a low-single-digit to mid-single-digit percent.

American Express delivered another quarter of impressive lending results, with net interest income increasing 31% year over year and 5% sequentially to $3.6 billion. The increase in net income was driven by net interest margin expansion and strong loan growth, with period-end cardmember loans increasing 17% year over year to $126 billion.

Unlike other credit card issuers, American Express is a payment network first and lender second, as noninterest income typically makes up around 80% of its total revenue. That said, changes in the structure of many of its cards to offer more lending, as well as a shift toward a younger cardholder base, have allowed the firm to enjoy a period of accelerated loan growth. While we expect interest income growth to decelerate as the impact of these filters through, the firm has maintained momentum for longer than we initially anticipated.

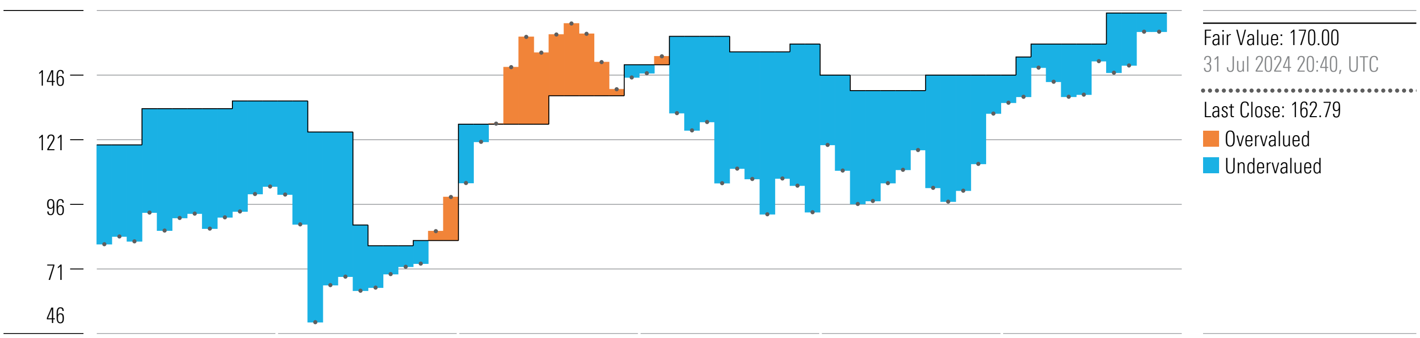
Discount revenue, the transaction fees American Express charges merchants when they accept its cards, increased 5% from last year to $8.6 billion. International and U.S. consumer spending volumes rose 13% and 7%, respectively, as American Express benefits from the growing size of its cardholder base and the resiliency of spending patterns (a symptom of its relative affluence). On a less positive note, American Express' commercial cards, which are responsible for around one third of total spending volume, continued a streak of weak results with spending volume only increasing 1% from last year.

Morningstar Equity Analyst Report | Report as of 2 Nov 2024 04:32, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC.

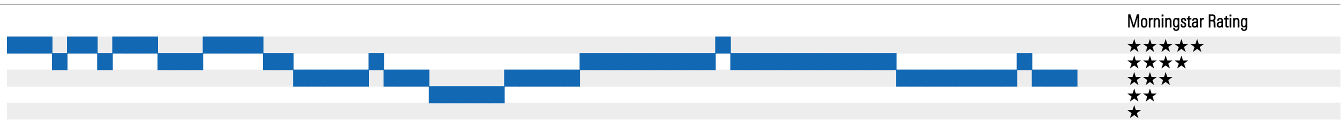
American Express Co AXP ★★ 1 Nov 2024 21:40, UTC

Competitors Price vs. Fair Value

Capital One Financial Corp COF

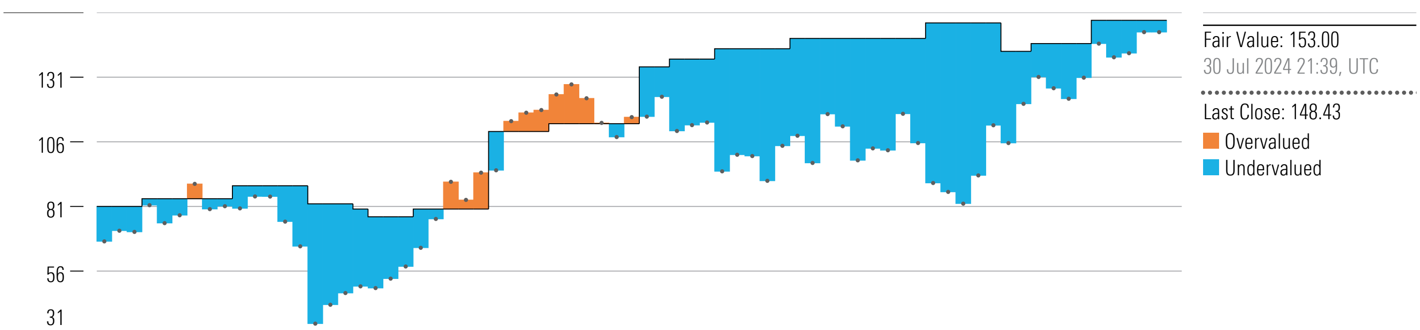


2019	2020	2021	2022	2023	YTD	
0.76	1.21	0.97	0.59	0.90	0.96	Price/Fair Value
38.26	-2.97	49.41	-34.28	43.63	25.53	Total Return %

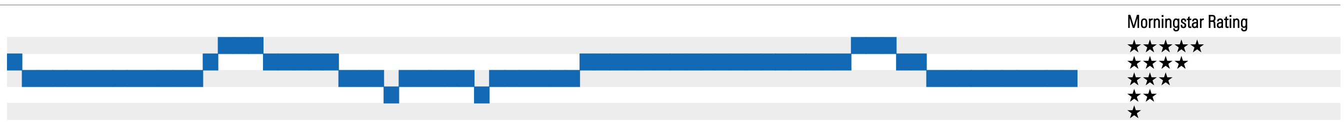


Total Return % as of 31 Oct 2024. Last Close as of 31 Oct 2024. Fair Value as of 31 Jul 2024 20:40, UTC.

Discover Financial Services DFS



2019	2020	2021	2022	2023	YTD	
0.95	1.13	1.02	0.67	0.74	0.99	Price/Fair Value
46.66	8.81	29.72	-13.35	17.65	33.92	Total Return %



Total Return % as of 31 Oct 2024. Last Close as of 31 Oct 2024. Fair Value as of 30 Jul 2024 21:39, UTC.

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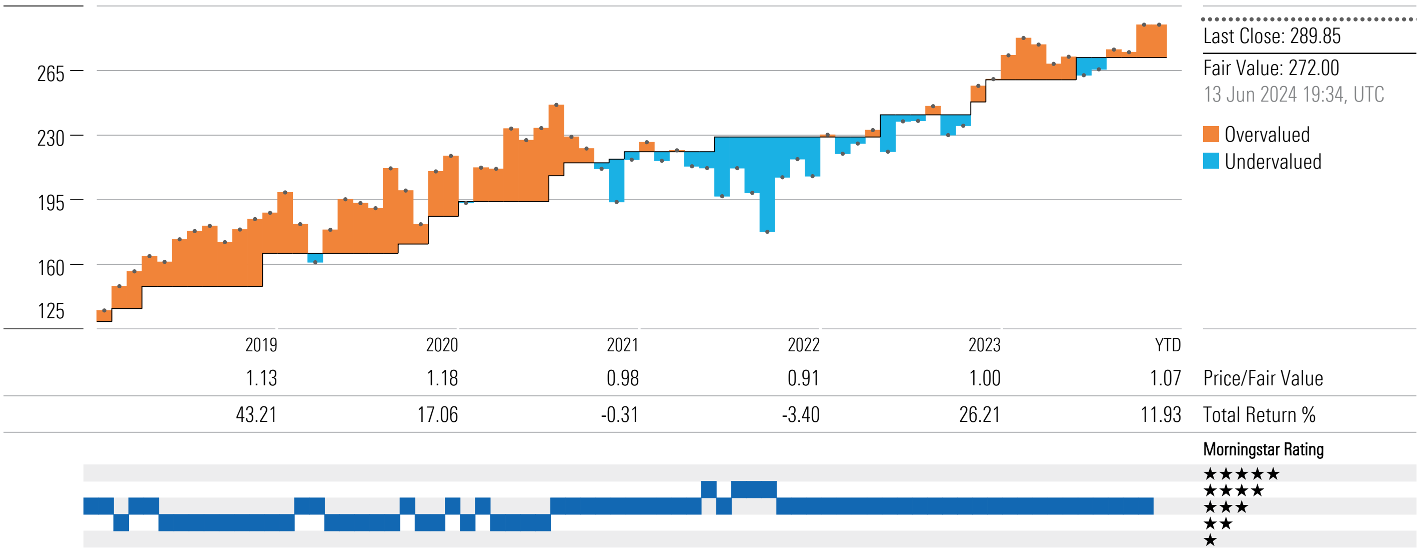
American Express Co AXP ★★ 1 Nov 2024 21:40, UTC

Competitors Price vs. Fair Value

Visa Inc Class A V



	2019	2020	2021	2022	2023	YTD	
	1.13	1.18	0.98	0.91	1.00	1.07	Price/Fair Value
	43.21	17.06	-0.31	-3.40	26.21	11.93	Total Return %

Total Return % as of 31 Oct 2024. Last Close as of 31 Oct 2024. Fair Value as of 13 Jun 2024 19:34, UTC.

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American Express Co AXP ★★ 1 Nov 2024 21:40, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
270.08 USD 31 Oct 2024	230.00 USD 1 Nov 2024 20:12, UTC	1.17	193.86 USD Bil 1 Nov 2024	Wide	Large Blend	Medium	Standard	2 Oct 2024 05:00, UTC

Morningstar Historical Summary

Financials as of 30 Sep 2024

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	TTM
Revenue (USD Bil)	33	33	37	37	40	44	36	43	53	60	49	64
Revenue Growth %	1.8	-2.1	11.9	0.6	9.3	8.2	-17.0	19.1	21.8	14.9	9.1	10.1
Provision for Loan Losses (USD Mil)	-2,044	-1,988	-2,027	-2,760	-3,352	-3,573	-4,730	1,419	-2,182	-4,923	-3,893	-5,330
Provision for Loan Losses % of Loans and Leases	-1.8	-1.7	-1.8	-2.1	-2.4	-2.4	-3.9	1.0	-1.3	-2.5	-1.9	-2.6
Revenue After Provision for Loan Losses (USD Mil)	—	—	—	—	—	—	31,357	0	0	0	—	—
Revenue After Provision for Loan Losses Growth %	—	—	—	—	—	—	—	-100.0	—	—	—	—
Operating Income (USD Tril)	8.99	7.94	8.04	7.43	8.12	8.43	4.30	10.69	9.59	10.51	10.14	12.65
Operating Margin %	—	—	—	—	—	—	—	—	—	—	—	—
Net Income (USD Mil)	5,885	5,163	5,375	2,748	6,921	6,759	3,135	8,060	7,514	8,374	7,959	9,892
Net Margin %	17.5	15.5	14.3	7.2	16.8	15.2	8.4	18.4	14.1	13.7	16.1	15.2
Diluted Shares Outstanding (Mil)	1,051	1,003	935	886	859	830	806	790	752	736	716	719
Diluted Earnings Per Share (USD)	5.56	5.05	5.61	2.99	7.91	7.99	3.77	10.02	9.85	11.21	10.97	13.59
Dividends Per Share (USD)	1.24	1.13	1.22	1.34	1.48	1.64	1.72	1.72	2.08	2.40	2.10	2.70

Valuation as of 31 Oct 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Recent Qtr	TTM
Price/Sales	2.9	2.2	2.1	2.7	2.3	2.5	2.6	3.2	2.2	2.4	3.1	3.0
Price/Earnings	17.3	12.5	13.1	19.1	22.5	15.1	29.9	17.1	14.8	17.5	20.2	19.9
Dividend Yield %	1.05	1.58	1.61	1.32	1.51	1.29	1.42	1.05	1.35	1.24	0.96	1.0
Price/Book	4.7	3.2	3.2	4.0	3.8	4.4	4.5	5.1	4.6	5.0	6.5	6.4
Price/Tangible Book	4.7	3.2	3.2	4.0	3.8	4.4	4.5	5.2	4.6	5.0	6.5	—

Operating Performance / Profitability as of 30 Sep 2024

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	TTM
ROA %	3.7	3.2	3.3	1.6	3.7	3.4	1.6	4.2	3.6	3.4	—	3.7
ROE %	29.1	24.5	25.5	13.7	33.5	29.2	13.2	35.1	31.6	31.3	—	34.2

Financial Leverage

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Recent Qtr	TTM
Debt/Capital %	73.7	69.9	69.6	75.3	72.4	71.5	65.1	63.6	63.3	63.1	64.3	—
Equity/Assets %	13.0	12.8	12.9	10.1	11.8	11.6	12.0	11.8	10.8	10.7	11.0	—

Morningstar Analyst Historical/Forecast Summary as of 01 Nov 2024

Financials

			Estimates		
Fiscal Year, ends 31 Dec 2023	2022	2023	2024	2025	2026
Revenue (USD Mil)	52,862	60,515	65,639	70,971	76,695
Revenue Growth %	24.7	14.5	8.5	8.1	8.1
Provision for Loan Losses (USD Mil)	2,182	4,923	5,193	4,998	5,375
Provision for Loan Losses % of Loans and Leases					
Revenue After Provision for Loan Losses (USD Mil)	0	0	0	0	0
Revenue After Provision for Loan Losses Growth %	—	—	—	—	—
Operating Income (USD Mil)	9,585	10,513	12,781	13,977	15,198
Efficiency Ratio %	77.7	74.5	73.4	73.3	73.2
Net Income (USD Mil)	7,514	8,374	10,033	10,972	11,930
Net Margin %					
Diluted Shares Outstanding (Mil)	752	751	723	723	723
Diluted Earnings Per Share(USD)	9.92	11.07	13.88	15.18	16.50
Dividends Per Share(USD)	—	—	—	—	—

Forward Valuation

			Estimates		
	2022	2023	2024	2025	2026
Price/Sales	—	—	—	—	—
Price/Earnings	14.9	16.9	19.6	18.0	16.5
Dividend Yield %	1.2	1.0	0.9	1.0	1.0
Price/Book	—	—	—	—	—
Price/Tangible Book	4.5	5.0	6.4	6.4	6.0

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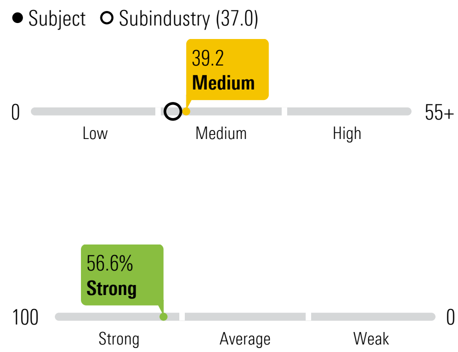
American Express Co AXP ★★ 1 Nov 2024 21:40, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
270.08 USD 31 Oct 2024	230.00 USD 1 Nov 2024 20:12, UTC	1.17	193.86 USD Bil 1 Nov 2024	Wide	Large Blend	Medium	Standard	2 Oct 2024 05:00, UTC

ESG Risk Rating Breakdown

Exposure	
Company Exposure[1]	39.2
– Manageable Risk	37.0
Unmanageable Risk[2]	**2.2**
Management	
Manageable Risk	37.0
– Managed Risk[3]	20.9
Management Gap[4]	**16.0**
Overall Unmanaged Risk	**18.3**



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

- Management measures a company's ability to manage ESG risks through its commitments and actions
- Management assesses a company's efficiency on ESG programs, practices, and policies
- Management score ranges from 0-100% showing how much manageable risk a company is managing

ESG Risk Rating

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

1. A company's Exposure to material ESG issues 2. Unmanageable Risk refers to risks that are inherent to a particular business model that cannot be managed by programs or initiatives 3. Managed Risk = Manageable Risk multiplied by a Management score of 56.6% 4. Management Gap assesses risks that are not managed, but are considered manageable 5. ESG Risk Rating Assessment = Overall Unmanaged Risk = Management Gap plus Unmanageable Risk

ESG Risk Rating Assessment[5]

ESG Risk Rating is of Oct 02, 2024. Highest Controversy Level is as of Oct 08, 2024. Sustainalytics Subindustry: Consumer Finance. Sustainalytics provides Morningstar with company ESG ratings and metrics on a monthly basis and as such, the ratings in Morningstar may not necessarily reflect current Sustainalytics' scores for the company. For the most up to date rating and more information, please visit: sustainalytics.com/esg-ratings/.

Peer Analysis 02 Oct 2024

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

Company Name	Exposure			Management			ESG Risk Rating		
American Express Co	39.2 | Medium	0	55+	56.6 | Strong	100	0	18.3 | Low	0	40+
Capital One Financial Corp	37.5 | Medium	0	55+	45.6 | Average	100	0	21.3 | Medium	0	40+
Discover Financial Services	36.4 | Medium	0	55+	39.4 | Average	100	0	22.8 | Medium	0	40+
Visa Inc	36.8 | Medium	0	55+	63.8 | Strong	100	0	15.2 | Low	0	40+
—	— | —	0	55+	— | —	100	0	— | —	0	40+

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Appendix
Historical Morningstar Rating

American Express Co AXP 1 Nov 2024 21:40, UTC

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
★★★	★★★	★★★★	★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★	★★★
Dec 2019	Nov 2019	Oct 2019	Sep 2019	Aug 2019	Jul 2019	Jun 2019	May 2019	Apr 2019	Mar 2019	Feb 2019	Jan 2019
★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★

Capital One Financial Corp COF 1 Nov 2024 21:41, UTC

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
★★★	★★★	★★★	★★★	★★★	★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★
Dec 2019	Nov 2019	Oct 2019	Sep 2019	Aug 2019	Jul 2019	Jun 2019	May 2019	Apr 2019	Mar 2019	Feb 2019	Jan 2019
★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★★	★★★★★	★★★★★	★★★★	★★★★★	★★★★★	★★★★★

Discover Financial Services DFS 1 Nov 2024 21:44, UTC

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
★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★★	★★★
Dec 2019	Nov 2019	Oct 2019	Sep 2019	Aug 2019	Jul 2019	Jun 2019	May 2019	Apr 2019	Mar 2019	Feb 2019	Jan 2019
★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★★

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Dec 2024	Nov 2024	Oct 2024	Sep 2024	Aug 2024	Jul 2024	Jun 2024	May 2024	Apr 2024	Mar 2024	Feb 2024	Jan 2024
—	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★
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
★★	★★	★★★	★★	★★	★★	★★	★★	★★★	★★★	★★	★★
Dec 2019	Nov 2019	Oct 2019	Sep 2019	Aug 2019	Jul 2019	Jun 2019	May 2019	Apr 2019	Mar 2019	Feb 2019	Jan 2019
★★	★★	★★	★★	★★	★★	★★	★★★	★★★	★★	★★★	★★★

Research Methodology for Valuing Companies

Overview

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

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

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

1. Economic Moat

The concept of an economic moat plays a vital role not only in our qualitative assessment of a firm's long-term investment potential, but also in the actual calculation of our fair value estimates. An economic moat is a structural feature that allows a firm to sustain excess profits over a long period of time. We define economic profits as returns on invested capital (or ROIC) over and above our estimate of a firm's cost of capital, or weighted average cost of capital (or WACC). Without a moat, profits are more susceptible to competition. We have identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.

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

When considering a company's moat, we also assess whether there is a substantial threat of value destruction, stemming from risks related to ESG, industry disruption, financial health, or other idiosyncratic issues. In this context, a risk is considered potentially value destructive if its occurrence would eliminate a firm's economic profit on a cumulative or midcycle basis. If we deem the probability of occurrence sufficiently high, we would not characterize the company as possessing an economic moat.

2. Estimated Fair Value

Combining our analysts' financial forecasts with the firm's economic moat helps us assess how long returns on invested capital are likely to exceed the firm's cost of capital. Returns of firms with a wide economic moat rating are assumed to fade to the perpetuity period over a longer period of time than the returns of narrow-moat firms, and both will fade slower than no-moat firms, increasing our estimate of their intrinsic value.

Our model is divided into three distinct stages:

Stage I: Explicit Forecast

In this stage, which can last five to 10 years, analysts make full financial statement forecasts, including items such as revenue, profit margins, tax rates, changes in workingcapital accounts, and capital spending. Based on these projections, we calculate earnings before interest, after taxes (EBI) and the net new investment (NNI) to derive our annual free cash flow forecast.

Stage II: Fade

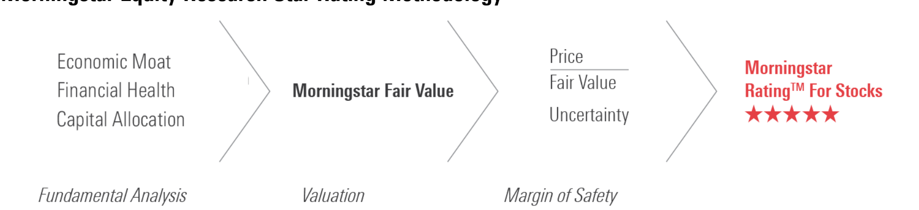
The second stage of our model is the period it will take the company's return on new invested capital—the return on capital of the next dollar invested ("RONIC")—to decline (or rise) to its cost of capital. During the Stage II period, we use a formula to approximate cash flows in lieu of explicitly modeling the income statement, balance sheet, and cash flow statement as we do in Stage I. The length of the second stage depends on the strength of the company's economic moat. We forecast this period to last anywhere from one year (for companies with no economic moat) to 10–15 years or more (for wide-moat companies). During this period, cash flows are forecast using four assumptions: an average growth rate for EBI over the period, a normalized investment rate, average return on new invested capital (RONIC), and the number of years until perpetuity, when excess returns cease. The investment rate and return on new invested capital decline until a perpetuity value is calculated. In the case of firms that do not earn their cost of capital, we assume marginal ROICs rise to the firm's cost of capital (usually attributable to less reinvestment), and we may truncate the second stage.

Stage III: Perpetuity

Once a company's marginal ROIC hits its cost of capital, we calculate a continuing value, using a standard perpetuity formula. At perpetuity, we assume that any growth or decline or investment in the business neither creates nor destroys value and that any new investment provides a return in line with estimated WACC.

Because a dollar earned today is worth more than a dollar earned tomorrow, we discount our projections of cash flows in stages I, II, and III to arrive at a total present value of expected future cash flows. Because we are modeling free cash flow to the firm—representing cash available to provide a return to all capital providers—we discount future cash flows using the WACC, which is a weighted average of the costs of equity, debt, and preferred stock (and any other funding sources), using expected future proportionate long-term, market-value weights.

Morningstar Equity Research Star Rating Methodology



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-

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

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

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

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

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

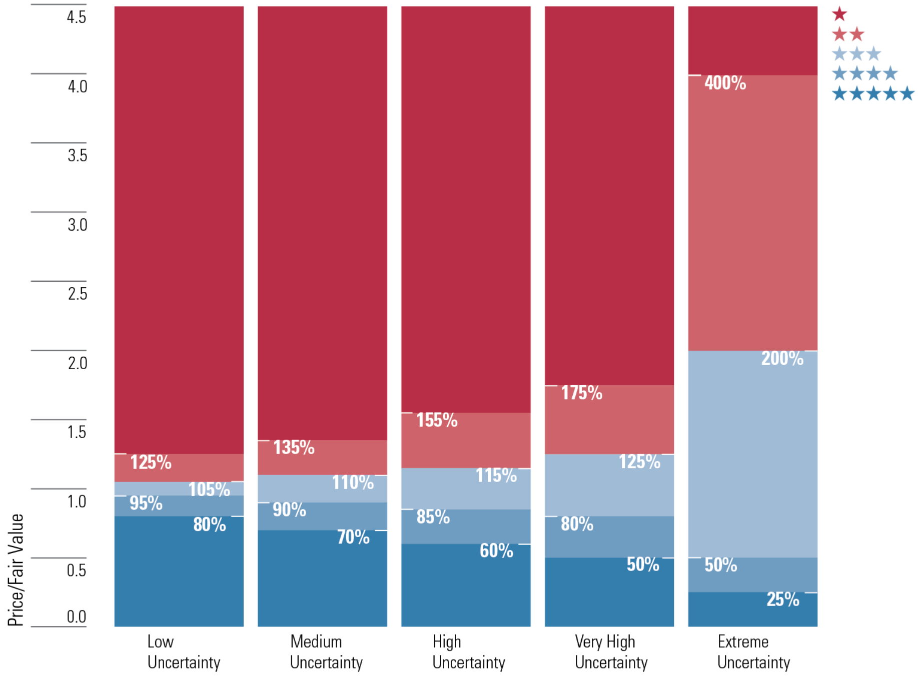
4. Market Price

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

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

Morningstar Star Rating for Stocks

Morningstar Equity Research Star Rating Methodology



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

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

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

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

The Morningstar Star Ratings for stocks are defined below:

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

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

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

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

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

Other Definitions

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

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

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

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

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

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

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

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

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

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

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