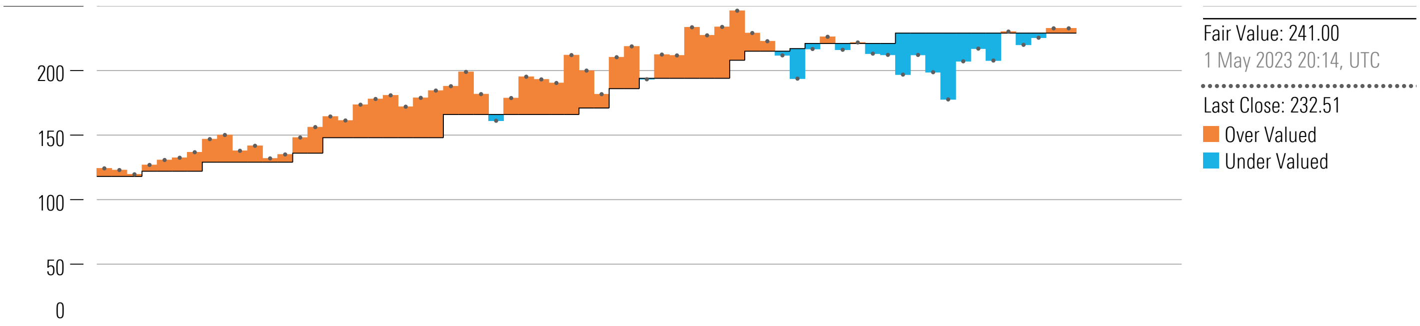
Morningstar Equity Analyst Report | Report as of 1 May 2023 20:19, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC.

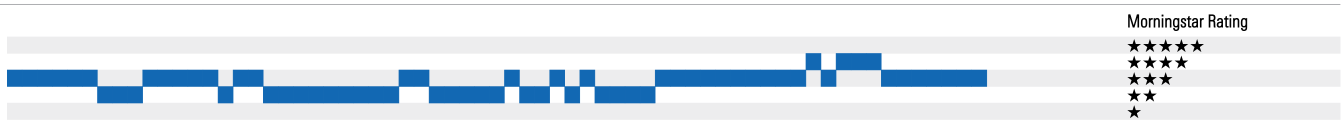
Visa Inc Class A V ★★★ 1 May 2023 20:16, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
232.51 USD 1 May 2023	241.00 USD 1 May 2023 20:14, UTC	0.96	487.43 USD Bil 1 May 2023	Wide	Stable	Medium	Standard	5 Apr 2023 05:00, UTC

Price vs. Fair Value



	2018	2019	2020	2021	2022	YTD	
	1.02	1.13	1.18	0.98	0.91	0.96	Price/Fair Value
	16.49	43.21	17.06	-0.31	-3.40	12.24	Total Return %



Total Return % as of 30 Apr 2023. Last Close as of 1 May 2023. Fair Value as of 1 May 2023 20:14, UTC.

Contents

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

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

Visa Has Both a Wide Moat and Strong Growth Prospects

Business Strategy & Outlook Brett Horn, CFA, Senior Equity Analyst, 1 May 2023

Visa is a relatively unique company in that it is a longtime, established market leader that still enjoys strong growth prospects. Despite the ongoing evolution of the payments industry, we think a wide moat surrounds the business and that Visa's position in the global electronic payment infrastructure is essentially unassailable.

The shift toward electronic payments has driven Visa's growth historically, and we expect that to continue for the foreseeable future. Digital payments, on a global basis, surpassed cash payments just a few years ago, suggesting this trend still has a lot of room to run. We think emerging markets could offer a further spurt of growth even if growth in developed markets slows. Visa's position as the leading network makes it something of a tollbooth business, and the company is relatively agnostic to the smaller shifts within electronic payments, since it earns fees regardless of whether payment is credit, debit, or mobile.

Visa has not been without its ups and downs recently. Cross-border transactions, which are particularly lucrative for the networks, saw dramatic declines due to the coronavirus outbreak and a reduction in global travel. But more recently this has turned into a material tailwind as cross-border volumes bounced back. History suggests travel ultimately makes a full recovery following disruptive events and we expect that to be the case again, although the process could take a few years. We think there are still some benefits for Visa ahead on this front.

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Sector	Industry
Financial Services	Credit Services

Business Description

Visa is the largest payment processor in the world. In fiscal 2021, it processed over $14 trillion in total volume. Visa operates in over 200 countries and processes transactions in over 160 currencies. Its systems are capable of processing over 65,000 transactions per second.

Visa obviously has sensitivity to the volume of consumer transactions, and the U.S. remains its largest market. A downturn in the economy would slow growth. Additionally, in the near term, the stronger dollar and the recent exit from Russia will weigh on reported growth. However, we don't see any long-term industry trends that will impede Visa's ability to maintain low double-digit growth in the coming years, and the scalability of the business should still allow the company to modestly expand its already ample margins over time.

Bulls Say Brett Horn, CFA, Senior Equity Analyst, 1 May 2023

- Visa has commanding market share in a scalable industry.
- There is still a long growth runway for electronic payments, which surpassed cash payments on a global basis only a few years ago.
- The scalable nature of the business should allow Visa to improve its already impressive margins.

Bears Say Brett Horn, CFA, Senior Equity Analyst, 1 May 2023

- Visa's leading market share creates more opportunities for loss than gain.
- The oligopolistic nature of the industry makes Visa and Mastercard targets for regulators and lawsuits, and the companies have paid some large fines.
- UnionPay provides an example of how governments could favor local networks, and this could shut Visa out of some emerging-market opportunities.

Economic Moat Brett Horn, CFA, Senior Equity Analyst, 1 May 2023

Leading payment networks such as Visa benefit, unsurprisingly, from a network effect. The more consumers that are plugged into a payment network, the more attractive that payment network becomes for merchants, which in turn makes the network more convenient for consumers, and so on. This explains why a small number of networks have come to dominate electronic payments, and at this point, Visa has reached essentially universal acceptance in most developed markets. While the network effect is the initial and primary driver of economic moats in this industry, the highly scalable nature of payment processing leads to sizable cost advantages for large payment networks, which in turn further cements their competitive positions. For the dominant payment networks with global footprints, such as Visa, the network effect and resulting cost advantage is strong enough to lead to a wide moat, in our view.

Visa traces its roots back to the issuance of the first Bank of America cards in the late 1950s. As credit cards grew, partnerships between credit card issuers became necessary, and Visa as a brand was formed in 1976. In the decades since, Visa has been one of the largest beneficiaries of the shift toward electronic payments. In fiscal 2021, the company processed over $10 trillion in purchase transactions. Visa has almost 16,000 financial institution partners, 3.4 billion Visa cards in circulation, and over 50 million merchants accepting Visa. According to the Nilson Report, Visa holds over 50% market share (by

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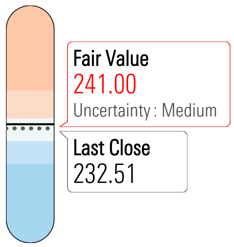
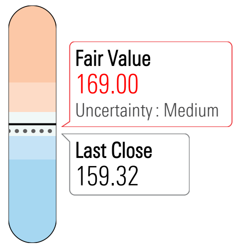
Competitors

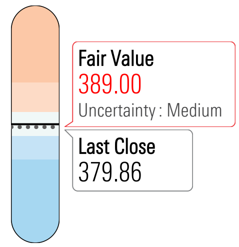
Visa Inc Class A V



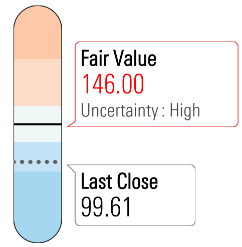
American Express Co AXP



Mastercard Inc Class A MA



Discover Financial Services DFS



	Visa Inc Class A V	American Express Co AXP	Mastercard Inc Class A MA	Discover Financial Services DFS
Economic Moat	Wide	Wide	Wide	Narrow
Moat Trend	Stable	Stable	Stable	Stable
Currency	USD	USD	USD	USD
Fair Value	241.00 1 May 2023 20:14, UTC	169.00 2 Mar 2023 22:03, UTC	389.00 29 Mar 2023 21:26, UTC	146.00 9 Nov 2022 19:31, UTC
1-Star Price	325.35	228.15	525.15	226.30
5-Star Price	168.70	118.30	272.30	87.60
Assessment	Fairly Valued 1 May 2023	Fairly Valued 1 May 2023	Fairly Valued 1 May 2023	Under Valued 1 May 2023
Morningstar Rating	★★★1 May 2023 20:16, UTC	★★★28 Apr 2023 21:16, UTC	★★★28 Apr 2023 21:16, UTC	★★★★28 Apr 2023 21:16, UTC
Analyst	Brett Horn, Senior Equity Analyst	Michael Miller, Equity Analyst	Brett Horn, Senior Equity Analyst	Michael Miller, Equity Analyst
Capital Allocation	Standard	Standard	Standard	Exemplary
Price/Fair Value	0.96	0.94	0.98	0.68
Price/Sales	15.85	2.19	16.07	1.99
Price/Book	12.64	4.61	67.57	1.98
Price/Earning	31.11	16.95	37.97	6.96
Dividend Yield	0.71%	1.34%	0.56%	2.32%
Market Cap	487.43 Bil	119.91 Bil	360.13 Bil	26.28 Bil
52-Week Range	174.60—250.58	130.65—182.31	276.87—390.00	87.64—121.17
Investment Style	Large Growth	Large Core	Large Growth	Mid Core

purchase volume) in the U.S., Europe, Latin America, and the Middle East/Africa. Visa also processes roughly twice as many transactions as its closest competitor, Mastercard. Simply put, Visa's position in the world of electronic payments is unparalleled. We don't believe that building a new network with a comparable size and reach is realistic over any foreseeable time line, and view Visa's position within the current global electronic payment infrastructure as essentially unassailable.

Visa has translated its dominant competitive position into an enviable level of profitability. Operating margins (using net revenue) in fiscal 2022 were 67%, and margins have generally trended upward because of the scalability of the business. Further, given the relatively asset-light nature of the business, returns on invested capital are quite healthy, averaging 29% over the past five years and 47% if goodwill is excluded.

Fair Value and Profit Drivers Brett Horn, CFA, Senior Equity Analyst, 1 May 2023

We are increasing our fair value estimate to $241 from $229 per share, primarily due to time value since our last update. Our fair value estimate equates to 29.0 times adjusted projected fiscal 2023 earnings. While growth had been muted in the beginning of the pandemic, particularly due to the impact on cross-border transactions, more recent growth has been above the company's historical experience as volumes bocuned back. We expect some ongoing recovery in the near term (partially offset by the stronger dollar and the exit from Russia) and think the ongoing shift toward electronic payments will allow Visa to maintain strong growth rates over the next five years. We project gross and net revenue to grow at a 11% and 10% CAGR, respectively, over the projection period. We think that future growth will be increasingly driven by international markets, as emerging markets become a more meaningful engine for the business. While margins on a gross revenue basis have stalled in recent years and have been under pressure through the pandemic, we think the scalability of the business, a bounceback in more lucrative cross-border transactions and more muted client incentive growth will allow for margin improvement going forward, although this will be partially offset by an increase in client incentives over time. We project operating margins (based on gross revenue) to improve modestly from 50% in fiscal 2022 to 51% by fiscal 2026. On a net revenue basis, we expect margins to improve at an average annual rate of 70 basis points. Given the company’s history of fines and one-time charges, we include ongoing one-time costs roughly in line with historical averages in our projections, but these costs are excluded from the margin levels above. We use a 9% cost of equity.

Risk and Uncertainty Brett Horn, CFA, Senior Equity Analyst, 1 May 2023

Visa’s revenue is tied to the amount and volume of consumer purchases, which creates significant macroeconomic sensitivity. Both Visa and Mastercard have paid substantial fines historically related to the oligopolistic nature of the industry, and legal and regulatory risk is intrinsic to the business model, given merchants’ desires to lower fees. While Visa’s and Mastercard’s positions in the current electronic payment industry are largely set, it continues to evolve in ways that could reduce their volume or profitability. Some governments have shown a preference for local payment networks, which could freeze Visa out of certain markets and impede the value it drives from its global network.

We see the company's largest ESG risk as data security. Any company involved in processing payments has potential exposure to breaches in its systems.

Capital Allocation Brett Horn, CFA, Senior Equity Analyst, 1 May 2023

Our capital allocation rating for Visa is Standard. In our opinion, the company’s balance sheet is sound, its capital investment decisions are fair, and its capital return strategy is appropriate.

We attribute the company's strong historical performance primarily to the wide moat around the business and favorable secular trends. That said, management deserves credit for avoiding any major hiccups and steering a fairly steady and profitable course. Alfred Kelly Jr. has been CEO since 2016 and served as a director since 2014. Before joining Visa, the bulk of his career was spent at American

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Express, where he oversaw a number of that business' segments. We like that he has a wealth of experience in managing payment networks, and we think that under his leadership the company has maintained a generally wise course.

Management has made one big move historically. In 2016, the company acquired Visa Europe for about $20 billion. Visa historically had been operated as a joint venture of issuer banks. When Visa reorganized in 2007, Visa Europe retained this old structure, and the acquisition brought this situation to a close. We think consolidating the global network was a smart but somewhat inevitable move, and the integration in the following years largely went smoothly, with management declaring the process effectively finished in fiscal 2018.

Like Mastercard, Visa has been very active in returning cash to shareholders, with dividends and stock buybacks over the past three years equating to 87% of free cash flow over that period. We like that management is largely content to return the company's ample profits, but question whether a more aggressive shift toward a higher dividend could make management's commitment to capital return more clear. Barring the Visa Europe acquisition, which was a unique situation, Visa has avoided large-scale M&A. We think this is wise, as the company's competitive position makes M&A somewhat unnecessary, and its position in the industry requires maintaining a fairly neutral stance toward other payments areas, to avoid unnecessary competition with other players within its ecosystem. However, we think there will be opportunities to pursue smaller deals that make strategic sense, and we like management's stated intention to focus on acquisitions that share the same competitive dynamics as legacy operations.

Analyst Notes Archive

Visa Earnings: Volume Growth Picks Up Brett Horn, CFA, Senior Equity Analyst, 26 Apr 2023
Visa actually saw volume growth pick up a bit despite ongoing macroeconomic uncertainty, but outside of this, the wide-moat company largely maintained its recent path in its fiscal second quarter. While we're encouraged by the company's recent performance, we will maintain our $229 fair value estimate, and believe shares are currently fairly valued.

Net revenue increased 11% year over year, or 13% on a constant-currency basis. Payment volume (on a constant-currency basis) and transaction growth were 10% and 12%, respectively, with both metrics improving a bit sequentially. We're encouraged to see the company show some momentum in the current macroeconomic environment. On the negative side, volume growth slowed as the company moved through the quarter and into April, suggesting growth might slow going forward.

Coming out of the pandemic, cross-border volume has been a major engine, due to the outsize fees Visa collects on these transactions, and the exposure to travel spending. Constant-currency cross-border volume excluding intra-Europe transactions—which are priced similarly to domestic transactions—grew 32% year over year in the quarter, essentially in line with the growth rate last quarter. We're pleased to see Visa maintain strong growth in this area, but we expect growth to come down as volumes converge on the prepandemic trend. Further, a negative turn in the economy could put the recovery in travel at risk.

Operating margins (on a net revenue basis) held flat at 66.8% compared with last year. While the company is seeing solid growth, we think that is being offset at the moment by some inflation in its cost base, and investments to spur future growth. Longer-term, we think the scalable nature of the business should allow for margin expansion over time. However, client incentives increased to 26.7% of gross revenue, and appear to have resumed their upward path. This could limit margin improvement on a gross revenue basis.

Visa Holds Up Relatively Well in Fiscal Q1 2023 Brett Horn, CFA, Senior Equity Analyst, 27 Jan 2023
Visa's fiscal first-quarter results largely mirrored what we saw from its peer Mastercard. Both companies are still enjoying a bit of a boost from the recovery in travel spending, but the impact is fading. Although there have been concerns about a potential macroeconomic downturn and the impact on consumer spending, we think volume has been holding up reasonably well. We will maintain our $229 per share fair value estimate for the wide-moat firm, and we view the shares as being fairly valued at this point.

Net revenue increased 12% year over year, or 15% excluding currency impacts, during the quarter. Payment volume increased 7% when excluding currency impacts, while transactions grew 10%. Like Mastercard, Visa is seeing volume growth slow, but, in our view, the growth rate remains solid.

Coming out of the pandemic, cross-border volume has been the biggest driver for the business, due to the outsize fees Visa collects on these transactions, and the exposure to travel spending. Constant-currency cross-border volume excluding intra-Europe transactions—which are priced similarly to domestic transactions—grew 31% year over year in the firm's fiscal first quarter.

This represents a significant comedown from recent quarters, but that was expected as we moved deeper into the recovery in travel. The cross-border rebound has been a material tailwind for Visa, and that tailwind would eventually diminish. Further, a negative turn in the economy could put the recovery in travel at risk. On the positive side, the reopening of China's borders could be a significant positive on this front.

Excluding one-time charges, operating margins (based on net revenue) declined modestly to 68.4% from 69.8% last year. Management pointed to increased personnel expenses as the culprit, with the company making some investments for growth.

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Visa Inc Class A V ★★★ 1 May 2023 20:16, UTC

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New CEO Taking Charge at Visa Brett Horn, CFA, Senior Equity Analyst, 18 Nov 2022

Visa announced that current CEO Alfred Kelly will step down and Ryan McInerney will take over at the start of February. Kelly, who has been CEO since 2016, will assume the role of executive chairman at that time. We have a generally favorable view of Kelly's tenure, although we believe the company's wide moat is the dominant factor behind its strong performance. McInerney, who came to Visa from JP Morgan, has served as president at Visa since 2013. We think Visa's decision to go with an insider—and Kelly's continued presence as executive chairman—suggests that the company will largely maintain its recent strategic course, and we see that as the right move. We will maintain our $229 fair value estimate.

Visa Sees Strong Growth in Fiscal Fourth Quarter Brett Horn, CFA, Senior Equity Analyst, 25 Oct 2022

Visa continued to enjoy strong growth in its fiscal fourth quarter. Overall, while the company’s near-term future is somewhat tied to the direction of the economy, we think favorable long-term secular trends and an ongoing bounce back in travel-related spending put the wide-moat company in a relatively strong position. We will maintain our $229 fair value estimate and see the shares as modestly undervalued.

Net revenue increased 19% year over year, or 23% on a constant currency basis. Purchase volumes in the quarter were up 10% on a constant currency basis. This does represent a slight deceleration from the last quarter, but we consider this to be a solid result, especially considering the drag from the decision to exit Russia.

Cross-border transactions have been a major driver of the business over the past couple of years, given the pandemic impact on travel and the relatively large fees Visa collects on cross-border transactions. This has been a significant positive for Visa in recent quarters as travel-related volumes have recovered. Constant currency cross-border volume excluding intra-Europe transactions (which are priced similarly to domestic transactions) grew 49% year over year in the quarter, basically maintaining the pace of growth Visa has seen the last few quarters. We continue to expect a full recovery in travel spending over time, and comparing current travel-related volumes to the 2019 level suggests there are still benefits for Visa ahead.

Visa Maintains its Momentum in Fiscal Q3 2022 Brett Horn, CFA, Senior Equity Analyst, 26 Jul 2022

Visa maintained its momentum in its fiscal third quarter, and the company continues to enjoy unusually high growth. Absent an economic downturn, we expect the wide-moat company will enjoy significant tailwinds until cross-border and travel spending has fully normalized. We will maintain our $229 per share fair value estimate.

Net revenue increased 19% year over year, driven by a 16% increase in processed transactions.

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Payments volume on a constant currency basis increased 12% year over year in the quarter, which did mark some deceleration from last quarter.

Cross-border transactions were a key issue for Visa during the pandemic, given much higher fees for these transactions and the dramatic decline in travel. But this has turned into a material tailwind for Visa in recent quarters as the pandemic impact has faded and reversed. Constant currency cross-border volume excluding intra-Europe transactions (which are priced similarly to domestic transactions) grew 48% year over year in the quarter, essentially maintaining the pace of growth Visa has seen the last few quarters. We continue to expect a full recovery in travel spending over time, with continued improvements in spending driving outsize growth for Visa in the near term.

We believe strong growth is allowing Visa to releverage its costs. Operating margins (based on net revenue and excluding one-time costs) improved to 66.9% from 66.3% last year. Client incentives came in at 26.1% of gross revenue, compared with 25.8% last year. Historically, client incentives have trended upward over time, and we expect that to remain the case over the long run. However, in the near term, the bounce back in cross-border volumes should help to stabilize this metric somewhat.

Visa Delivers Strong Fiscal Second Quarter Brett Horn, CFA, Senior Equity Analyst, 27 Apr 2022

Visa delivered a strong second quarter, as the company continues to see some bounceback from its pandemic-related issues. We think the relatively quick recovery supports our wide moat rating and highlights the favorable long-term secular trend for Visa. While the decision to exit Russia will likely be a bit of an issue in the coming quarters, we think the company should be able to continue to achieve outsize growth in the near term as headwinds fall off. We will maintain our $221 fair value estimate.

Net revenue grew 25% year over year, maintaining last quarter's rate. Payments volume was up 17%, which marked a slight deceleration from last quarter.

Cross-border volume has been Visa's biggest issue through the pandemic, as this area generates much higher fees and is highly exposed to travel. But results in the quarter suggest an ongoing and relatively sharp recovery. Excluding intra-Europe transactions (which are priced similarly to domestic transactions), cross-border volumes grew 47% year over year on a constant currency basis, largely in line with the growth rate in recent quarters. The impact of the omicron variant appears to have been short-lived, and we continue to expect a full recovery in travel spending over time. This should drive strong growth for Visa in the near term.

Due to the rebound in revenue, Visa was able to leverage its costs and operating margins (based on net revenue) improved to 66.8% from 62.5% last year. Client incentives, as a percentage of total revenue, held steady at 25.8%, compared with last year. M

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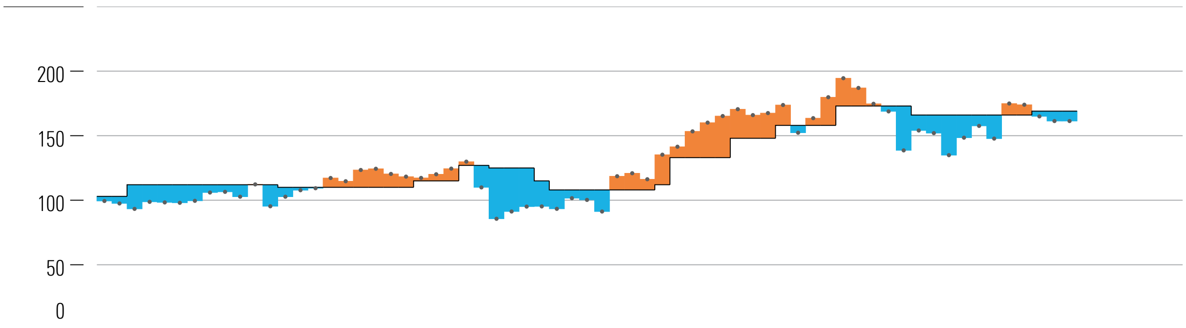
Competitors Price vs. Fair Value

American Express Co AXP



Fair Value: 169.00
2 Mar 2023 22:03, UTC

Last Close: 159.32
Over Valued
Under Valued

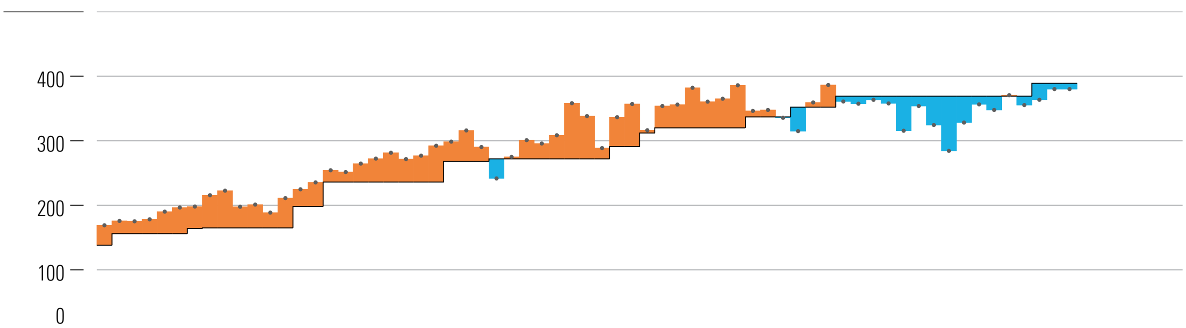
	2018	2019	2020	2021	2022	YTD	
	0.85	1.08	1.12	1.04	0.89	0.94	Price/Fair Value
	-2.57	32.28	-1.49	36.73	-8.47	9.96	Total Return %

Morningstar Rating

★★★★★
★★★★
★★★
★★
★

Total Return % as of 30 Apr 2023. Last Close as of 1 May 2023. Fair Value as of 2 Mar 2023 22:03, UTC.

Mastercard Inc Class A MA



Fair Value: 389.00
29 Mar 2023 21:26, UTC

Last Close: 379.86
Over Valued
Under Valued

	2018	2019	2020	2021	2022	YTD	
	1.14	1.11	1.23	1.02	0.94	0.98	Price/Fair Value
	25.30	58.98	20.08	1.16	-2.68	9.62	Total Return %

Morningstar Rating

★★★★★
★★★★
★★★
★★
★

Total Return % as of 30 Apr 2023. Last Close as of 1 May 2023. Fair Value as of 29 Mar 2023 21:26, UTC.

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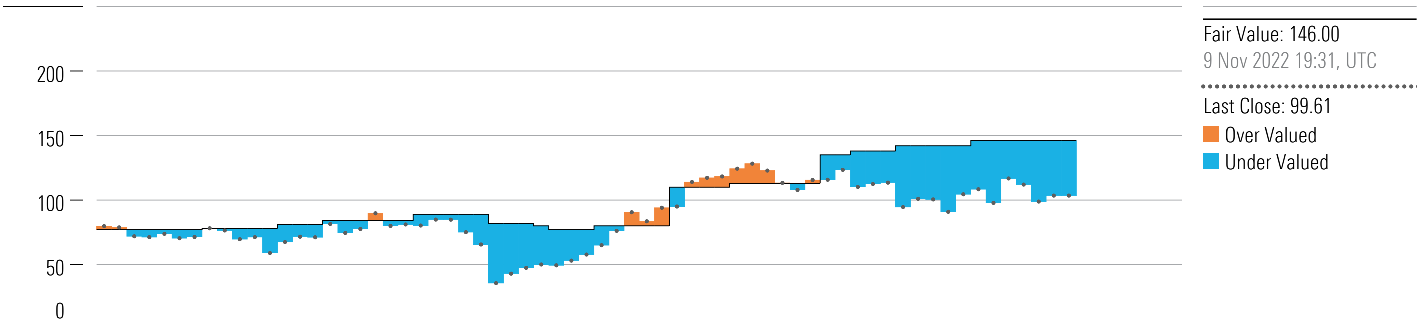
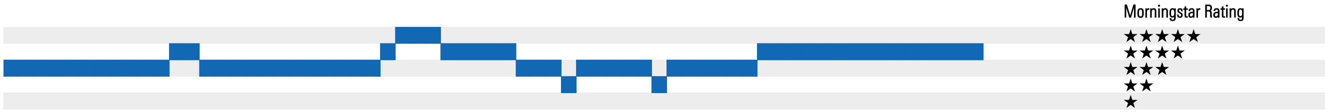
Discover Financial Services DFS



	2018	2019	2020	2021	2022	YTD	
	0.76	0.95	1.13	1.02	0.67	0.68	Price/Fair Value
	-21.37	46.66	8.81	29.72	-13.35	6.38	Total Return %

Morningstar Rating



Total Return % as of 30 Apr 2023. Last Close as of 1 May 2023. Fair Value as of 9 Nov 2022 19:31, UTC.

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Morningstar Historical Summary

Financials as of 31 Mar 2023

Fiscal Year, ends 30 Sep	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	YTD	TTM
Revenue (USD Bil)	12	13	14	15	18	21	23	22	24	29	16	31
Revenue Growth %	13.0	7.9	9.3	8.7	21.7	12.3	11.5	-4.9	10.3	21.6	11.7	15.0
EBITDA (USD Bil)	7.64	8.17	9.49	8.94	12.72	14.03	16.07	15.07	17.38	19.54	11.00	20.42
EBITDA Margin %	64.9	64.3	68.4	59.3	69.3	68.1	70.0	69.0	72.1	66.6	69.1	65.9
Operating Income (USD Bil)	7.24	8.15	9.08	9.76	12.16	13.56	15.40	14.09	15.81	19.68	10.77	20.72
Operating Margin %	61.5	64.2	65.4	64.7	66.3	65.8	67.0	64.5	65.6	67.2	67.6	66.9
Net Income (USD Bil)	4.98	5.44	6.33	5.99	6.70	10.30	12.08	10.87	12.31	14.96	8.44	15.79
Net Margin %	42.1	42.7	45.5	39.3	36.5	50.0	52.6	49.7	51.1	51.0	53.0	50.9
Diluted Shares Outstanding (Mil)	2,624	2,523	2,457	2,414	2,395	2,329	2,272	2,223	2,188	2,136	2,098	2,110
Diluted Earnings Per Share (USD)	1.90	2.16	2.58	2.48	2.80	4.42	5.32	4.89	5.63	7.00	4.02	7.48
Dividends Per Share (USD)	0.33	0.40	0.48	0.56	0.66	0.83	1.00	1.20	1.28	1.50	0.90	1.65

Valuation as of 28 Apr 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Recent Qtr	TTM
Price/Sales	12.4	13.0	13.7	12.5	14.9	14.9	18.6	22.3	19.7	15.2	15.8	15.8
Price/Earnings	29.3	30.4	30.0	31.4	40.7	29.9	35.3	44.6	38.5	29.7	31.4	31.2
Price/Cash Flow	48.3	23.0	28.9	33.8	29.7	24.2	33.4	46.5	31.2	23.5	25.4	25.6
Dividend Yield %	0.62	0.64	0.64	0.75	0.61	0.67	0.56	0.56	0.62	0.76	0.73	0.71
Price/Book	5.2	5.9	6.2	6.7	9.5	10.3	14.0	15.2	13.4	12.3	12.8	12.6
EV/EBITDA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Operating Performance / Profitability as of 31 Mar 2023

Fiscal Year, ends 30 Sep	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	YTD	TTM
ROA %	13.1	14.5	16.2	11.5	10.2	15.0	17.0	14.2	15.0	17.8	9.8	18.7
ROE %	18.2	20.0	22.1	20.8	24.6	36.9	41.8	36.0	35.8	40.9	22.8	44.1
ROIC %	18.2	20.0	22.1	14.1	14.8	24.3	27.5	21.7	22.3	26.4	15.1	29.6
Asset Turnover	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.4

Financial Leverage

Fiscal Year, ends 30 Sep	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Recent Qtr	TTM
Debt/Capital %	—	—	—	32.6	33.7	32.8	32.5	36.8	34.7	36.2	34.8	—
Equity/Assets %	74.7	71.1	75.8	42.5	40.1	41.2	40.3	38.5	45.3	41.6	44.5	—
Total Debt/EBITDA	—	—	—	2.1	1.7	1.4	1.2	1.9	1.2	1.1	1.9	—
EBITDA/Interest Expense	—	1,021.0	3,164.0	20.9	—	22.9	30.2	29.2	33.9	36.3	39.4	37.2

Morningstar Analyst Historical/Forecast Summary as of 28 Oct 2022

Financials

Fiscal Year, ends 09-30-2022	2021	2022	Estimates 2023	2024	2025
Revenue (USD Mil)	28,510	32,472	39,605	43,951	49,210
Revenue Growth %	-2.2	13.9	22.0	11.0	12.0
EBITDA (USD Mil)	14,859	16,611	20,542	22,459	25,257
EBITDA Margin %	52.1	51.2	51.9	51.1	51.3
Operating Income (USD Mil)	14,092	15,807	19,681	21,405	24,027
Operating Margin %	49.4	48.7	49.7	48.7	48.8
Net Income (USD Mil)	10,875	12,313	15,673	17,275	19,294
Net Margin %	38.1	37.9	39.6	39.3	39.2
Diluted Shares Outstanding (Mil)	2,223	2,118	2,136	2,106	2,049
Diluted Earnings Per Share(USD)	4.89	5.81	7.34	8.20	9.42
Dividends Per Share(USD)	1.20	1.32	1.50	1.70	1.90

Forward Valuation

	2021	2022	Estimates 2023	2024	2025
Price/Sales	16.7	11.6	12.3	11.1	9.9
Price/Earnings	45.6	30.6	31.7	28.4	24.7
Price/Cash Flow	49.2	26.0	27.3	27.1	25.1
Dividend Yield %	0.5	0.7	0.6	0.7	0.8
Price/Book	13.7	10.0	14.0	13.3	12.1
EV/EBITDA	32.4	23.3	23.9	21.9	19.5

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Appendix
Historical Morningstar Rating

Visa Inc Class A V 1 May 2023 20:16, UTC

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
★★	★★	★★	★★	★★	★★	★★	★★★	★★★	★★	★★★	★★★
Dec 2018	Nov 2018	Oct 2018	Sep 2018	Aug 2018	Jul 2018	Jun 2018	May 2018	Apr 2018	Mar 2018	Feb 2018	Jan 2018
★★★	★★★	★★★	★★	★★	★★	★★★	★★★	★★★	★★★	★★★	★★★

American Express Co AXP 28 Apr 2023 21:16, UTC

Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
—	—	—	—	—	—	—	★★★	★★★	★★★	★★★	★★★
Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★★★	★★★	★★★★	★★★★	★★★	★★★★	★★★★	★★★	★★★	★★★	★★	★★
Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★★★	★★★	★★	★★	★★	★★	★★	★★	★★	★★★	★★	★★★
Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
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Dec 2019	Nov 2019	Oct 2019	Sep 2019	Aug 2019	Jul 2019	Jun 2019	May 2019	Apr 2019	Mar 2019	Feb 2019	Jan 2019
★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★
Dec 2018	Nov 2018	Oct 2018	Sep 2018	Aug 2018	Jul 2018	Jun 2018	May 2018	Apr 2018	Mar 2018	Feb 2018	Jan 2018
★★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★★	★★★	★★★

Mastercard Inc Class A MA 28 Apr 2023 21:16, UTC

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
★★	★★	★★	★★	★★	★★	★★	★★★	★★★	★★	★★	★★
Dec 2018	Nov 2018	Oct 2018	Sep 2018	Aug 2018	Jul 2018	Jun 2018	May 2018	Apr 2018	Mar 2018	Feb 2018	Jan 2018
★★	★★	★★	★★	★★	★★	★★	★★	★★	★★	★★	★★

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Dec 2023 —	Nov 2023 —	Oct 2023 —	Sep 2023 —	Aug 2023 —	Jul 2023 —	Jun 2023 —	May 2023 ★★★★	Apr 2023 ★★★★	Mar 2023 ★★★★	Feb 2023 ★★★★	Jan 2023 ★★★★
Dec 2022 ★★★★	Nov 2022 ★★★★	Oct 2022 ★★★★	Sep 2022 ★★★★	Aug 2022 ★★★★	Jul 2022 ★★★★	Jun 2022 ★★★★	May 2022 ★★★★	Apr 2022 ★★★★	Mar 2022 ★★★★	Feb 2022 ★★★	Jan 2022 ★★★
Dec 2021 ★★★	Nov 2021 ★★★	Oct 2021 ★★★	Sep 2021 ★★★	Aug 2021 ★★	Jul 2021 ★★★	Jun 2021 ★★★	May 2021 ★★★	Apr 2021 ★★★	Mar 2021 ★★★	Feb 2021 ★★	Jan 2021 ★★★
Dec 2020 ★★★	Nov 2020 ★★★	Oct 2020 ★★★★	Sep 2020 ★★★★	Aug 2020 ★★★★	Jul 2020 ★★★★	Jun 2020 ★★★★	May 2020 ★★★★★	Apr 2020 ★★★★★	Mar 2020 ★★★★★	Feb 2020 ★★★★	Jan 2020 ★★★
Dec 2019 ★★★	Nov 2019 ★★★	Oct 2019 ★★★	Sep 2019 ★★★	Aug 2019 ★★★	Jul 2019 ★★★	Jun 2019 ★★★	May 2019 ★★★	Apr 2019 ★★★	Mar 2019 ★★★	Feb 2019 ★★★	Jan 2019 ★★★★
Dec 2018 ★★★★	Nov 2018 ★★★	Oct 2018 ★★★	Sep 2018 ★★★	Aug 2018 ★★★	Jul 2018 ★★★	Jun 2018 ★★★	May 2018 ★★★	Apr 2018 ★★★	Mar 2018 ★★★	Feb 2018 ★★★	Jan 2018 ★★★

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.

To assess the sustainability of excess profits, analysts perform ongoing assessments of the moat trend. A firm's moat trend is positive in cases where we think its sources of competitive advantage are growing stronger; stable where we don't anticipate changes to competitive advantages over the next several years; or negative when we see signs of deterioration.

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

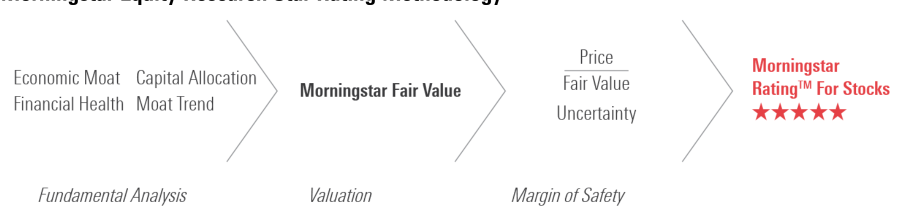
Once a company's marginal ROIC hits its cost of capital, we calculate a continuing value, using a standard perpetuity formula. At perpetuity, we assume that any growth or decline or investment in the business neither creates nor destroys value and that any new investment provides a return in line with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

Morningstar Equity Research Star Rating Methodology



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Research Methodology for Valuing Companies

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 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.

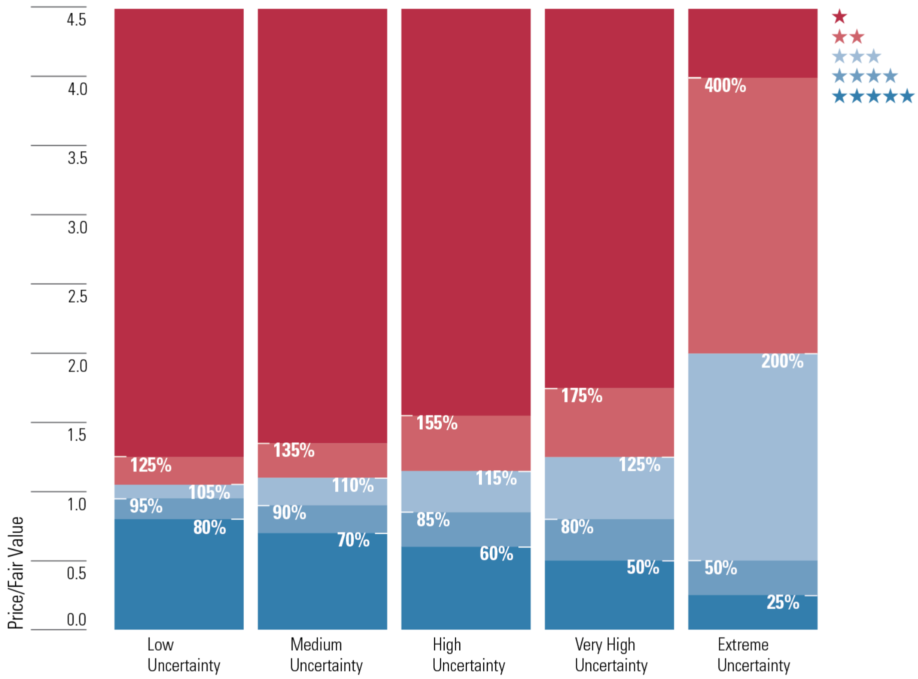
	Margin of Safety	
Qualitative Analysis Uncertainty Ratings	★★★★★Rating	★Rating
Low	20% Discount	25% Premium
Medium	30% Discount	35% Premium
High	40% Discount	55% Premium
Very High	50% Discount	75% Premium
Extreme	75% Discount	300% Premium

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.

Morningstar Equity Research Star Rating Methodology



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

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 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.

Research Methodology for Valuing Companies

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

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

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

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

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

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

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

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

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

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Risk Warning

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