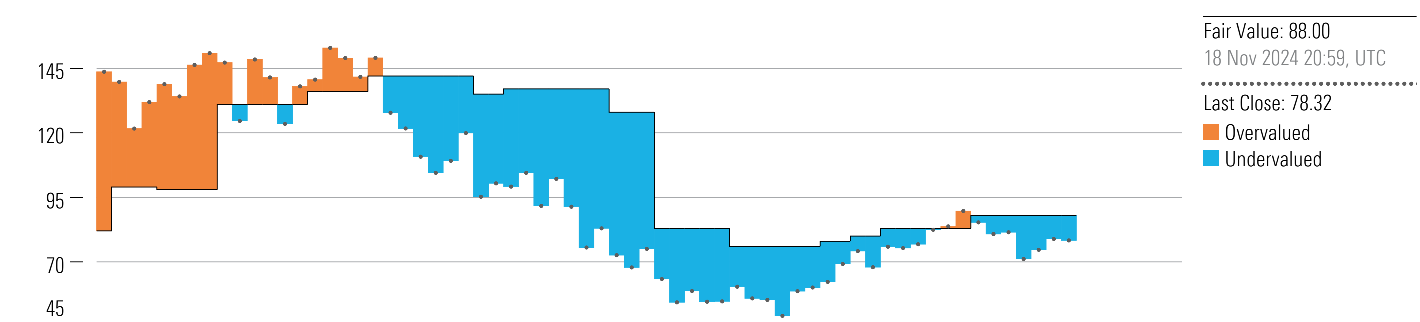
Morningstar Equity Analyst Report | Report as of 6 May 2025 15:59, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC. Page 1 of 22

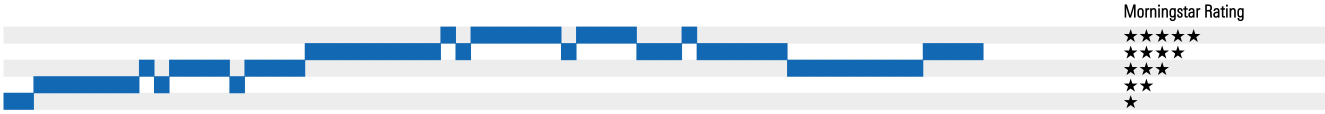
Fidelity National Information Services Inc FIS ★★★★ 5 May 2025 21:32, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
78.32 USD 5 May 2025	88.00 USD 18 Nov 2024 20:59, UTC	0.89	39.89 USD Bil 6 May 2025	Narrow	Mid Blend	Medium	Standard	2 Apr 2025 05:00, UTC

Price vs. Fair Value



	2020	2021	2022	2023	2024	YTD	
	1.08	0.77	0.53	0.79	0.92	0.89	Price/Fair Value
	2.71	-21.74	-36.12	-8.40	36.86	-2.54	Total Return %



Total Return % as of 05 May 2025. Last Close as of 05 May 2025. Fair Value as of 18 Nov 2024 20:59, UTC.

Contents

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

FIS Earnings: As Expected, Bank Tech Growth Still Muted

Analyst Note Brett Horn, CFA, Senior Equity Analyst, 6 May 2025

FIS' first-quarter results weren't impressive in an absolute sense, as growth in the bank tech operations remained muted and margins declined. However, nothing in the quarter was a major surprise.

Why it matters: Overall organic year-over-year revenue growth was 4% in the quarter, in line with the previous quarter. Adjusted margin declined about 140 basis points year over year, but this was due to a difficult comparison. Management expects modest margin expansion over the full year.

- The bank solutions segment saw 2% organic growth. Management predicted a slow start to the year, and we are encouraged by the fact that growth didn't fall below expectations, suggesting that this is simply a timing issue that the company needs to work past. Management's full-year growth targets for this segment are in line with our long-term projections.
- The capital market solutions segment turned in another strong quarter with organic growth of 9%. However, much of that growth was driven by one-time license revenue; recurring revenue growth was only 6%.

The bottom line: We will maintain our $88 fair value estimate for the narrow-moat company and see the shares as modestly undervalued.

- Management provided some more color on its proposed deal with Global Payments. Strategically, we see this as a good move for FIS. We like the idea of making a clean break with Worldpay, as that minority stake represented a material portion of FIS' overall value and investors had little insight into the performance of the business.

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Sector	Industry
Technology	Information Technology Services

Business Description

Fidelity National Information Services provides core processing and ancillary services to banks, but its business has expanded over time. By acquiring SunGard in 2015, the company now provides record-keeping and other services to investment firms. With the acquisition of Worldpay in 2019, FIS was providing payment processing services for merchants and holding leading positions in the United States and United Kingdom. But the company sold off a majority interest in Worldpay and now has only a minority stake.

- Additionally, we see the issuer processing business that FIS will acquire as a better fit with its legacy bank tech operations. This move supports the company's goal to transition toward becoming a more stable producer of free cash flow, in our view.

Business Strategy & Outlook Brett Horn, CFA, Senior Equity Analyst, 27 Feb 2025

Fidelity National Information Services' acquisition of Worldpay in 2019 was one of three similar transformational deals that took place in short order. But FIS has more recently decided to undo the Worldpay deal as it struggled with operational issues within the Worldpay business.

Following a period of weak performance, management changed at FIS at the end of 2022. The new team, frustrated with the performance of the Worldpay business, originally decided that FIS would spin off Worldpay. We questioned whether the spinoff was the correct move. FIS' peers, Fiserv and Global Payments, have not faced the issues that have plagued FIS. To us, this suggests Worldpay's issues stemmed more from operational missteps (specifically underinvestment in the SMB, or small and medium-sized business, space) and that the strategy behind the combination was not necessarily flawed.

Management later decided to sell a 55% stake in Worldpay to the private firm GTCR instead. The deal valued Worldpay at $17.5 billion, or 9.8 times 2023 EBITDA, including corporate and additional stand-alone costs, with potentially another $1 billion in the future based on GTCR's returns. We believe Worldpay might be better off as a private company, given that we think the business needs significant investment to restore growth. To this end, we like that GTCR committed an additional investment of up to $1.25 billion for acquisitions. On the other hand, we think FIS sold a majority stake at a somewhat depressed level. Additionally, the two companies remain intertwined and Worldpay has become a private company, which will potentially reduce transparency into its turnaround efforts. Overall, if Worldpay had to be divested, we would have preferred a clean break.

On the positive side, following the sale, FIS returned to being primarily a bank tech provider. This business, while lower growth, is relatively predictable and stable, and we believe this segment has the strongest moat among FIS' businesses. But investors will likely have very limited insight into the performance of Worldpay, which will still account for a meaningful portion of the overall value.

Bulls Say Brett Horn, CFA, Senior Equity Analyst, 27 Feb 2025

- The bank technology business is very stable, characterized by high amounts of recurring revenue and long-term contracts.
- FIS's core processing relationships are incredibly sticky.
- With healthy operating margins and limited reinvestment needs, FIS throws off a good amount of free cash flow and actively returns it to shareholders.

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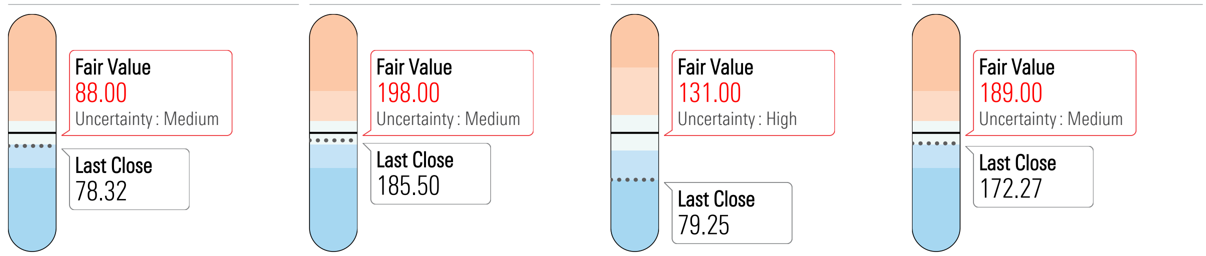
Competitors

	Fidelity Natio...n Services Inc FIS	Fiserv Inc FI	Global Payments Inc GPN	Jack Henry & Associates Inc JKHY



	Fidelity Natio...n Services Inc FIS	Fiserv Inc FI	Global Payments Inc GPN	Jack Henry & Associates Inc JKHY
Economic Moat	Narrow	Narrow	Narrow	Wide
Currency	USD	USD	USD	USD
Fair Value	88.00 18 Nov 2024 20:59, UTC	198.00 3 Mar 2025 17:13, UTC	131.00 17 Apr 2025 21:00, UTC	189.00 13 Nov 2024 21:50, UTC
1-Star Price	118.80	267.30	203.05	255.15
5-Star Price	61.60	138.60	78.60	132.30
Assessment	Undervalued 5 May 2025	Fairly Valued 5 May 2025	Undervalued 5 May 2025	Undervalued 5 May 2025
Morningstar Rating	★★★★5 May 2025 21:32, UTC	★★★5 May 2025 21:30, UTC	★★★★★5 May 2025 21:30, UTC	★★★★5 May 2025 21:29, UTC
Analyst	Brett Horn, Senior Equity Analyst	Brett Horn, Senior Equity Analyst	Brett Horn, Senior Equity Analyst	Brett Horn, Senior Equity Analyst
Capital Allocation	Standard	Standard	Standard	Exemplary
Price/Fair Value	0.89	0.94	0.60	0.91
Price/Sales	4.29	5.15	2.00	5.54
Price/Book	2.65	3.98	0.88	6.36
Price/Earning	52.65	33.01	15.07	31.04
Dividend Yield	1.89%	0.00%	1.26%	1.29%
Market Cap	41.18 Bil	102.85 Bil	19.49 Bil	12.56 Bil
52-Week Range	66.51—91.98	146.25—238.59	65.93—120.00	157.00—196.00
Investment Style	Mid Blend	Large Blend	Mid Value	Mid Blend

Bears Say Brett Horn, CFA, Senior Equity Analyst, 27 Feb 2025

- Compared with its peers, FIS' customer base skews more heavily to large banks, which have greater bargaining leverage.
- FIS' bank technology operations are tied to a mature industry, which limits its growth prospects.
- With the Worldpay business now deconsolidated, investors will have little insight into its performance.

Economic Moat Brett Horn, CFA, Senior Equity Analyst, 27 Feb 2025

While we believe certain segments of FIS' business benefit from a wide moat, we believe a narrow Morningstar Economic Moat Rating is appropriate for the business as a whole.

FIS' roots lie in core processing systems, the most basic and mission-critical system for banks, and this business is contained in the company's banking segment. Core processing is the nuts-and-bolts system

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that banks need to maintain their deposit and loan accounts and to post daily transactions. Given the integral nature of core processing to their operations, banks very rarely switch systems. Besides the potential for interruptions, converting systems would require the banks to retrain employees. Customers typically sign multiyear contracts, and customer retention approaches 99% annually, excluding customers lost because of acquisitions by another bank. Its leading market share also gives FIS an edge in this scalable business. We think a wide moat surrounds core processing.

But the bank technology industry has expanded significantly over time, with providers now providing services in areas such as loan origination, electronic bill payments, debit card processing, and online banking. While we believe many of these products enjoy switching costs, and areas such as payment processing have built economies of scale that lead to a cost advantage, switching costs for these services are not as immense as for core processing. Further, compared with peers, FIS' customer base skews toward larger banks, which have more leverage. Overall, we believe only a narrow moat surrounds this segment of the business.

The capital markets segment offers services to investment firms and enjoys some similar dynamics to the banking segment. Its services center around largely back-office, day-to-day activities, and customers typically sign three- to five-year contracts. We believe this business benefits from meaningful switching costs, but that the magnitude of the switching costs is significantly lower than for core processing for banks. We believe this segment merits a narrow moat rating.

With its merger with Worldpay in 2019, FIS expanded into merchant acquiring. Payment processing of any type is highly scalable, as once a payment platform is established, there is little incremental cost to additional transactions. As a result, a handful of acquirers have come to dominate the industry. Recent mergers and acquisitions have further consolidated the space, and Worldpay had been at the front of this trend, with the early 2018 merger of Vantiv and Worldpay creating the largest stand-alone acquirer in the US, with a little over 20% market share. Worldpay serves merchants across the size spectrum, but we believe it and other leading acquirers are the only ones with the scale to effectively serve large merchants. As a result of its scale and the resulting cost advantage, we believe a narrow moat surrounds the merchant segment. While FIS now only holds a minority interest in Worldpay, that stake is still a meaningful portion of the company's overall value.

Fair Value and Profit Drivers Brett Horn, CFA, Senior Equity Analyst, 27 Feb 2025

Our fair value estimate for FIS is $88 per share, equates to 15.2 times our 2025 adjusted earnings per shares projection.

While FIS' legacy business bank technology held up relatively well, the acquiring side of the business growth saw a material negative impact from the coronavirus pandemic. We then saw a strong bounceback starting in 2021, with industry participants stating that volume has steadily and significantly improved. However, FIS lagged its peers during this recovery, which we attribute in part to its relatively heavy reliance on large merchants and its exposure to the UK market. More importantly, the company's performance within the small merchant space appeared to deteriorate. This poor performance prompted the sale of a majority stake in Worldpay.

With the company now focused on its more mature bank tech operations, we expect only modest revenue growth over time. We expect slightly higher growth from the capital markets segment, but we still project only a 4% revenue CAGR over the next five years for the company as a whole.

The acquisition of Worldpay involved substantial cost synergies that have now been undone. Management initiated a sizable cost reduction plan that offset this in 2024. We think the substantial cost reductions this year and limited long-term growth will make dramatic margin improvement difficult over time, but that the scalability of the business should offer some ongoing opportunities to modestly improve margins. We expect adjusted EBITDA margins to improve at an average annual rate of 40 basis points through our projection period.

We use a cost of equity of 7.5%.

Risk and Uncertainty Brett Horn, CFA, Senior Equity Analyst, 27 Feb 2025

Any weaknesses in the banking sector could lead banks to defer technology purchases, hurting FIS' top line, and any dramatic changes in the structure of the banking industry could have hard-to-predict consequences for FIS. Aging core processing systems and increased needs for system flexibility could lead to higher replacement rates over time and erode the company’s moat.

The payment processing industry is evolving, and while the position of the acquirers within the current dominant framework is well established, disruption could lessen the profitability the industry can generate or cut the acquirers out altogether. As the company’s revenue is directly tied to revenue at its merchant customers, results at Worldpay are sensitive to macroeconomic conditions.

We see the company's largest environmental, social, and governance risk as data security. Historically, the industry has experienced significant system breaches at times, which creates event risk. The risk of breaches is likely higher on the acquiring side, but a breach on the bank technology side could have greater consequences.

We rate the firm as having a Medium Morningstar Uncertainty Rating.

Capital Allocation Brett Horn, CFA, Senior Equity Analyst, 27 Feb 2025

Our Morningstar Capital Allocation Rating for FIS 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.

In the years immediately following its 2006 spinoff, FIS was very busy, completing a string of major

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acquisitions and a major stock repurchase following failed buyout talks. We think the course management set was aggressive but has proved to be generally wise, and we give management credit for avoiding any major stumbles during this period and building a market position that was defensible over time.

The acquisition of SunGard in 2015 for about $9 billion demonstrated management's willingness to complete large M&A transactions when an appropriate target was available. In our view, the deal was reasonably priced, and the strategic fit made sense.

The $43 billion acquisition of Worldpay was very similar to the Fiserv and First Data and the Global Payments and TSYS combinations that also occurred in 2019. These deals all brought together companies with operations on the acquirer and issuer side, which should improve the data available to control fraud, which is a key issue in serving the online payments space. Additionally, the synergies announced as part of this deal were ample and justified the premium paid, in our view. Finally, FIS' multinational bank client base was a good match with Worldpay's stated intent to focus on international expansion. However, FIS has now sold a majority stake in Worldpay, and it is hard to look at this deal as anything but a mistake, although, in our view, the mistake was less in the strategy behind the deal and more in operational missteps following the acquisition. We understand the impulse to put these issues behind the company, but think the sale was not necessarily the best choice for the company in the long run.

At the start of 2015, COO Gary Norcross became CEO. Norcross later took on the role of chairman of the board of directors. Norcross had been expected to move into the role of chair at the start of 2023. However, Stephanie Ferris was named CEO in December 2022 following operational issues under Norcross' watch and Jeffrey Goldstein took over as chair. Ferris was the CFO of Worldpay prior to the acquisition and led the integration with FIS. Her mandate was clearly to make meaningful changes in light of the company's recent performance, and she led the decision to sell a majority stake in Worldpay. We think she has set the firm on a more stable but lower-growth path going forward. While the path current management has taken has not necessarily been optimal in our view, returning to a focus on its legacy operations should still create an attractive long-term picture.

Analyst Notes Archive

FIS Earnings: Results Hold Steady Under New Approach Brett Horn, CFA,Senior Equity Analyst,4 Nov 2024

FIS underwent a major change at the beginning of the year, selling off a majority stake in its Worldpay acquiring operations and refocusing on its bank tech roots. While this move created some uncertainty, we thought the resulting business would be more stable but also generate more modest growth. So far, that seems to be playing out, and management appears to be managing the transition without any major hiccups. We will maintain our $83 fair value estimate for the narrow-moat company and see the shares as about fairly valued at the moment.Overall revenue was up 4% year over year on an organic basis, with 3% and 7% growth in the banking and capital markets segments, respectively. All three figures were in line with the previous quarter, and the company is tracking with our long-term expectations.Adjusted EBITDA margin fell to 41.3% from 42.7% last year, but the decline appears to be related to the timing of some corporate expenses. Management continues to expect 50 basis points of margin improvement for the full year. We think the company has done well in finding cost cuts to offset cost deleveraging from the divestiture, but we question whether this will impede margin improvement longer term.Management modestly raised its earnings per share guidance for the year, which appears to be driven in part by better-than-expected performance from Worldpay. This is encouraging, given that the minor stake is still a significant part of FIS' overall value. But it also highlights the negative side of the divestiture, which is the limited disclosure we now have on this side of the business.

Fidelity National Information Services Earnings: New Approach Bearing Fruit Brett Horn, CFA,Senior Equity Analyst,6 Aug 2024

Fidelity National Information Services underwent a major change at the beginning of the year, as it sold a majority stake in Worldpay, and refocused on its bank technology and capital-market operations. Second-quarter results suggest this shift continues to progress relatively smoothly. We think the company is now more stable, but has lower long-term growth prospects. We will maintain our $83 per share fair value estimate for the narrow-moat company and see shares as modestly undervalued at the moment.Overall revenue grew 4% year over year on an organic basis. The banking and capital market segments grew 3% and 7%, respectively, with both figures improving modestly sequentially. Overall growth improved to a level in line with our long-term expectations.Adjusted EBITDA margins improved to 40.1% from 39.0% last year. Coming into this year, we saw margins as a source of uncertainty, as cost deleveraging from the spin-off would potentially be offset by cost reductions. We are pleased to see that results are roughly in line with the company’s expectations.Based on its results, management modestly raised its full-year earnings per share guidance. This improvement comes partially from a better-than-expected contribution from Worldpay. In our view, this illustrates a potential negative with how FIS structured the sale of Worldpay. While FIS retains a significant stake in Worldpay and Worldpay’s results can have a meaningful impact on Fidelity's earnings, we have very limited disclosure on Worldpay’s performance.Fidelity repurchased $1.1 billion in shares in the quarter and remains committed to repurchasing $4 billion this year. The full-year figure equates to about 9% of the current market capitalization. Given the current stock price, we see repurchases as a good use of capital, and would see a strong long-term commitment to capital return as consistent with the company’s new strategy.

FIS Earnings: Good Start as Company Sets a New Path Brett Horn, CFA,Senior Equity Analyst,6 May

2024

Following the sale of a majority interest in the Worldpay business in January, FIS has returned to a focus on its legacy operations. We think the new FIS will be a more stable operation with lower long-term growth prospects. The first quarter marked a fairly strong start to this new direction. We will maintain our $80 fair value estimate for the narrow-moat company and see the shares as modestly undervalued.Growth picked up sequentially but remained modest. Overall revenue grew 3% year over year while the banking and capital markets segments saw adjusted year-over-year growth of 2% and 6%, respectively. Both of these results are roughly in line with our long-term expectations.Margins were a positive surprise in the quarter, with adjusted EBITDA margin coming in at 39.5%, compared with 37.5% last year. FIS will face two competing factors when it comes to margins this year. The sale of a majority interest in Worldpay will unwind much of the cost synergies of that merger. However, management has embarked on a cost-reduction plan and expects margins to improve modestly (20-40 basis points) this year. So far, the company appears to be ahead of schedule, but the banking segment appears to have benefited from some high-margin license revenue in the quarter. This can be lumpy, and the fact that management maintained its margin guidance for the full year suggests it may be transitory.During the quarter, FIS returned $1.6 billion to shareholders, with $1.4 billion of that being buybacks. We think a focus on returning capital is consistent with the company's new path, and we are encouraged to see management be relatively aggressive out of the gate. Management increased its full-year share-repurchase target to $4 billion from $3.5 billion.

FIS Earnings: Company Sets Off on Its Next Phase Brett Horn, CFA,Senior Equity Analyst,26 Feb 2024

FIS didn't finish 2023 on an impressive note, but with its having recently completed the sale of a majority interest in the Worldpay business, the end of the year was more about setting the stage for what comes next, and the company's expectations are roughly in line with our own. We will maintain our $78 fair value estimate for the narrow-moat company and see the shares as modestly undervalued.Adjusted overall revenue was basically flat year over year, with the core banking business flat and capital markets up 1%. Management attributed the relatively weak performance to a falloff in nonrecurring revenue. Management expects 4% growth in 2024, which is roughly in line with our long-term expectations now that the higher-growth acquiring business has been sold.Adjusted EBITDA margin improved to 42.1% from 41.4% last year. Management believes it is making good progress with its cost-reduction efforts. It increased its 2024 cost-reduction target and believes it can achieve modest margin expansion in 2024.Management will maintain a 35% payout ratio in 2024, which will mean a reduction in the dividend now that Worldpay earnings are no longer included. However, we expect that capital return will remain a priority and that the company will return essentially all of its free cash flow to shareholders for the foreseeable future. Management expects to return at least $4 billion in 2024 through dividends and buybacks.

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Fidelity National Information Services Earnings: First Look at FIS's Future Brett Horn, CFA,Senior Equity Analyst,7 Nov 2023

Fidelity National Information Services' third-quarter results provided a look at how the company will perform following the sale of Worldpay operations, as it is now reporting Worldpay as discontinued operations. Overall, the company should see lower growth but also become a more stable and predictable company that focuses on capital return. While we think the course management chose for Worldpay was not optimal, this is not an unattractive proposition. We will maintain our $76 fair value estimate for the narrow-moat company and see shares as undervalued.Revenue from continuing operations grew 3% year over year, or 4% organically. The banking and capital markets segments saw 3% and 6% organic growth, respectively. Overall, growth was in line with what we expect long term. Adjusted EBITDA margin improved to 43.0% from 42.3% last year, reflecting the increased focus on cost control. On a GAAP basis, FIS reported a modest loss for the quarter, due primarily to a $1.5 billion noncash charge related to Worldpay.FIS intends to reinstitute share repurchases with the expectation of repurchasing $500 million in the fourth quarter, toward a goal of $3.5 billion in total by the end of 2024. Most of the proceeds of the Worldpay sale will be devoted to debt reduction, which should result in modest leverage and significant financial flexibility given the capital-light nature of the business. Management has been clear that capital return will be the focus but noted on the call that it will still look at small tuck-in deals.The sale of Worldpay is on track to be completed during the first quarter of 2024. In our view, the shift toward classifying Worldpay as discontinued operations highlights one of the negatives of FIS' plan for Worldpay. With its results reduced to a line item, we think it will be very difficult to assess any potential long-term turnaround at Worldpay.

FIS Earnings: Tracking a Bit Ahead of Expectations Brett Horn, CFA,Senior Equity Analyst,2 Aug 2023

Fidelity National Information Services' second-quarter results were not impressive in an absolute sense, but the company is holding steady and tracking a bit ahead of our expectations. We remain comfortable with our $76 per share fair value estimate for the narrow-moat company and consider shares undervalued, although the long-term picture will be more complicated given the company's decision to maintain a minority stake in Worldpay.Overall, revenue was up 2% year over year at FIS on an organic basis. The Worldpay segment saw 1% growth. While this materially lags peers, the segment's growth rate was roughly in line with what we've seen from Worldpay over the past two quarters, suggesting the business is stable. The banking segment saw 2% growth, which is modestly below our long-term expectations, but we are also seeing similarly weak growth from peers right now. Finally, the capital markets segment remains the main driver of growth, with 7% growth year over year in the quarter.FIS' adjusted EBITDA margins declined to 41.4% in the second quarter from 43.0% last year. Issues within the Worldpay business remain a drag on margins, and we think a decline in deconversion fees is weighing on margins in the banking segment. Following the company's decision to sell a majority stake

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in Worldpay, FIS provided an update on its cost-savings program, which will now apply only to the businesses remaining with the firm, with FIS' revised target for total savings exiting 2024 at $1 billion, down from $1.25 billion previously.On a separate note, during the quarter, FIS took a $6.8 billion goodwill impairment charge related to the proposed sale of a majority stake in Worldpay.

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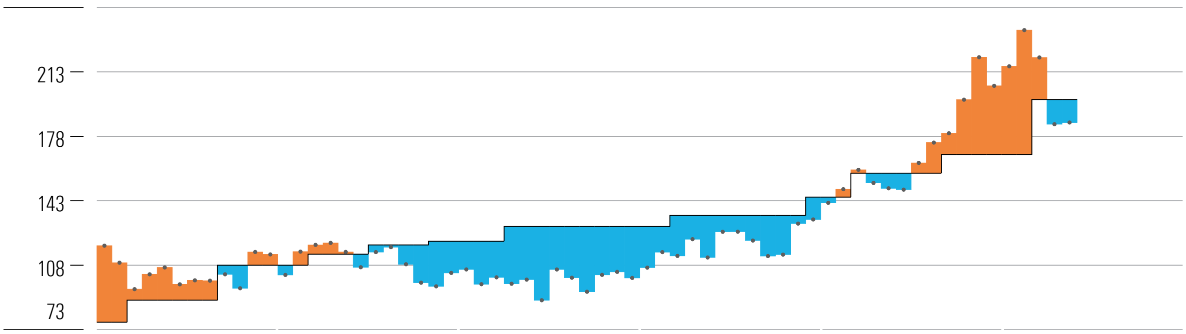
Fidelity National Information Services Inc FIS ★★★★ 5 May 2025 21:32, UTC

Competitors Price vs. Fair Value

Fiserv Inc FI

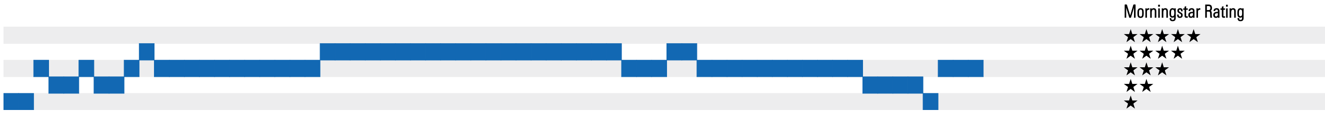


Fair Value: 198.00
3 Mar 2025 17:13, UTC

Last Close: 185.50
Overvalued
Undervalued

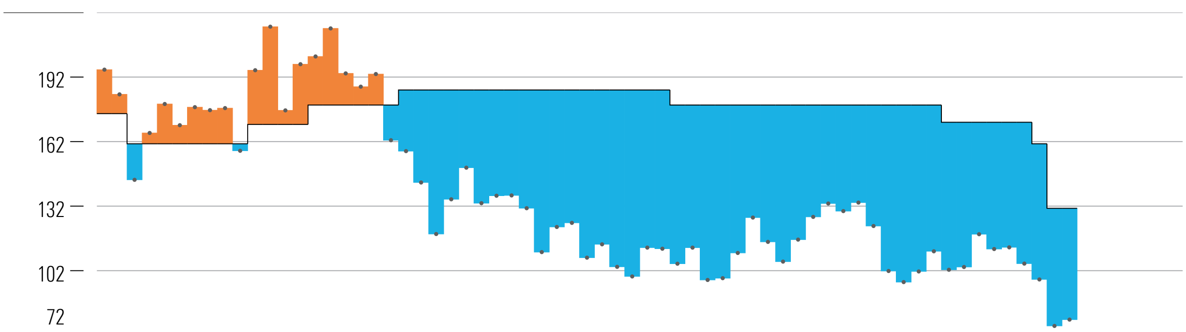
	2020	2021	2022	2023	2024	YTD
Price/Fair Value	1.05	0.86	0.78	0.92	1.22	0.94
Total Return %	-1.53	-8.84	-2.62	31.43	54.64	-9.70

Morningstar Rating



Total Return % as of 05 May 2025. Last Close as of 05 May 2025. Fair Value as of 3 Mar 2025 17:13, UTC.

Global Payments Inc GPN

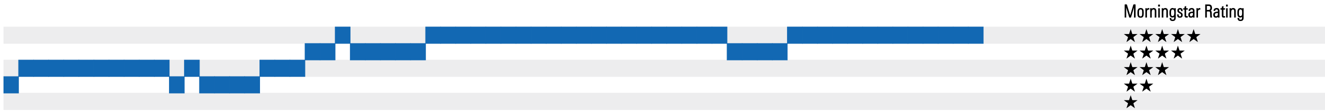


Fair Value: 131.00
17 Apr 2025 21:00, UTC

Last Close: 79.25
Overvalued
Undervalued

	2020	2021	2022	2023	2024	YTD
Price/Fair Value	1.27	0.73	0.53	0.71	0.66	0.61
Total Return %	18.43	-36.84	-25.79	28.88	-10.98	-29.06

Morningstar Rating



Total Return % as of 05 May 2025. Last Close as of 05 May 2025. Fair Value as of 17 Apr 2025 21:00, UTC.

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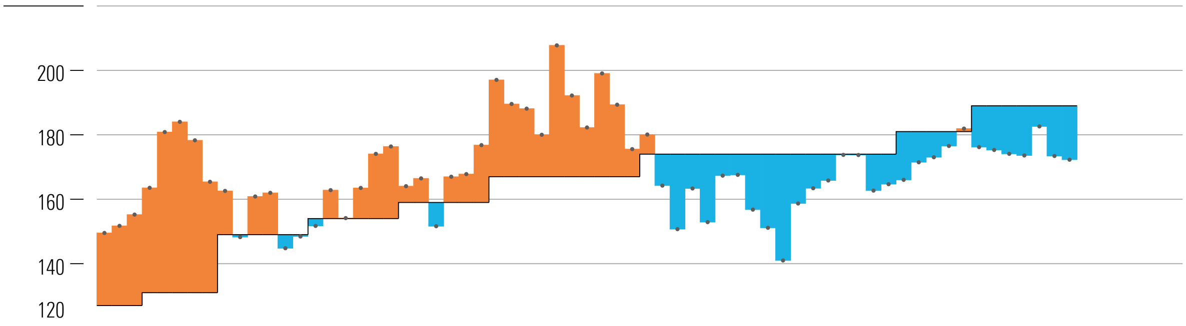
Fidelity National Information Services Inc FIS ★★★★ 5 May 2025 21:32, UTC

Competitors Price vs. Fair Value

Jack Henry & Associates Inc JKHY

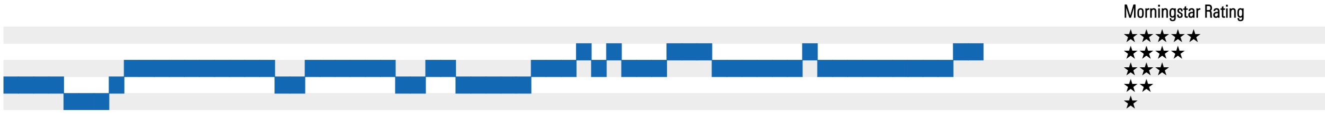


Fair Value: 189.00
13 Nov 2024 21:50, UTC

Last Close: 172.27
Overvalued
Undervalued

	2020	2021	2022	2023	2024	YTD	
	1.09	1.05	1.05	0.94	0.93	0.91	Price/Fair Value
	12.38	4.22	6.31	-5.74	8.62	-1.40	Total Return %

Morningstar Rating



Total Return % as of 05 May 2025. Last Close as of 05 May 2025. Fair Value as of 13 Nov 2024 21:50, UTC.

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Fidelity National Information Services Inc FIS ★★★★ 5 May 2025 21:32, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
78.32 USD 5 May 2025	88.00 USD 18 Nov 2024 20:59, UTC	0.89	39.89 USD Bil 6 May 2025	Narrow	Mid Blend	Medium	Standard	2 Apr 2025 05:00, UTC

Morningstar Valuation Model Summary

Financials as of 27 Feb 2025	Actual			Forecast				
Fiscal Year, ends 31 Dec	2022	2023	2024	2025	2026	2027	2028	2029
Revenue (USD Mil)	14,528	9,821	10,127	10,451	10,930	11,431	11,957	12,470
Operating Income (USD Mil)	1,590	1,580	1,619	2,686	3,215	3,416	3,691	3,973
EBITDA (USD Mil)	-12,185	4,051	3,385	4,108	4,313	4,527	4,828	5,091
Adjusted EBITDA (USD Mil)	-11,305	4,813	4,075	4,258	4,463	4,677	4,978	5,241
Net Income (USD Mil)	-16,720	-6,654	1,453	1,807	2,242	2,401	2,341	2,560
Adjusted Net Income (USD Mil)	1,781	1,465	1,596	3,059	3,153	3,310	3,258	3,443
Free Cash Flow To The Firm (USD Mil)	-15,172	-5,581	6,279	2,692	2,629	2,767	2,740	2,907
Weighted Average Diluted Shares Outstanding (Mil)	604	591	555	528	508	485	473	454
Earnings Per Share (Diluted) (USD)	-27.68	-11.26	2.62	3.42	4.41	4.95	4.95	5.64
Adjusted Earnings Per Share (Diluted) (USD)	2.95	2.48	2.88	5.80	6.20	6.83	6.88	7.59
Dividends Per Share (USD)	1.88	2.08	1.44	1.51	1.59	1.67	1.75	1.84

Margins & Returns as of 27 Feb 2025		Actual			Forecast					
	3 Year Avg	2022	2023	2024	2025	2026	2027	2028	2029	5 Year Avg
Operating Margin %	-26.7	10.9	16.1	16.0	25.7	29.4	29.9	30.9	31.9	28.7
EBITDA Margin %	—	-83.9	41.3	33.4	39.3	39.5	39.6	40.4	40.8	—
Adjusted EBITDA Margin %	—	-77.8	49.0	40.2	40.8	40.8	40.9	41.6	42.0	41.2
Net Margin %	-56.2	-115.1	-67.8	14.4	17.3	20.5	21.0	19.6	20.5	19.8
Adjusted Net Margin %	14.3	12.3	14.9	15.8	29.3	28.8	29.0	27.3	27.6	28.4
Free Cash Flow To The Firm Margin %	-33.1	-104.4	-56.8	62.0	25.8	24.1	24.2	22.9	23.3	24.1

Growth & Ratios as of 27 Feb 2025		Actual			Forecast					
	3 Year CAGR	2022	2023	2024	2025	2026	2027	2028	2029	5 Year CAGR
Revenue Growth %	-10.0	4.7	-32.4	3.1	3.2	4.6	4.6	4.6	4.3	4.3
Operating Income Growth %	8.8	26.5	-0.6	2.5	65.9	19.7	6.3	8.1	7.6	19.7
EBITDA Growth %	-164.1	-342.7	-133.3	-16.4	21.4	5.0	5.0	6.7	5.4	8.7
Adjusted EBITDA Growth %	-6.7	-325.2	-142.6	-15.3	4.5	4.8	4.8	6.5	5.3	5.2
Earnings Per Share Growth %	57.4	-4222.5	-59.3	-123.3	30.8	28.8	12.3	-0.2	14.1	16.6
Adjusted Earnings Per Share Growth %	57.4	7.1	-15.9	16.0	101.5	7.0	10.1	0.8	10.2	16.6

Valuation as of 27 Feb 2025	Actual			Forecast				
	2022	2023	2024	2025	2026	2027	2028	2029
Price/Earning	23.0	24.2	28.0	13.5	12.6	11.5	11.4	10.3
Price/Sales	2.8	3.6	4.2	3.9	3.8	3.6	3.4	3.3
Price/Book	1.5	2.6	2.9	2.7	2.6	2.5	2.5	2.5
Price/Cash Flow	—	—	—	—	—	—	—	—
EV/EBITDA	-5.1	11.2	12.9	12.2	11.6	11.1	10.4	9.9
EV/EBIT	36.0	34.0	32.5	19.3	16.1	15.2	14.1	13.1
Dividend Yield %	2.8	3.5	1.8	1.9	2.0	2.1	2.2	2.4
Dividend Payout %	63.9	84.0	50.1	26.1	25.6	24.4	25.5	24.3
Free Cash Flow Yield %	—	—	—	—	—	—	—	—

Operating Performance / Profitability as of 27 Feb 2025	Actual			Forecast				
Fiscal Year, ends 31 Dec	2022	2023	2024	2025	2026	2027	2028	2029
ROA %	-26.4	-21.8	4.3	5.4	6.6	7.0	6.7	7.3
ROE %	-61.0	-49.1	9.3	11.7	14.5	16.0	16.1	17.9
ROIC %	1.9	2.9	5.5	12.2	29.4	31.9	35.2	38.4

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Fidelity National Information Services Inc FIS ★★★★ 5 May 2025 21:32, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
78.32 USD 5 May 2025	88.00 USD 18 Nov 2024 20:59, UTC	0.89	39.89 USD Bil 6 May 2025	Narrow	Mid Blend	Medium	Standard	2 Apr 2025 05:00, UTC

Financial Leverage (Reporting Currency)	Actual			Forecast				
Fiscal Year, ends 31 Dec	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Debt/Capital %	33.6	35.2	21.0	18.8	18.8	19.3	19.4	19.8
Assets/Equity	2.3	2.3	2.2	2.2	2.2	2.3	2.4	2.5
Net Debt/EBITDA	-1.6	4.7	3.2	2.4	2.3	2.3	2.3	2.2
Total Debt/EBITDA	-1.8	4.0	2.8	2.7	2.6	2.6	2.5	2.5
EBITDA/ Net Interest Expense	-37.7	6.8	11.6	11.6	11.9	12.0	10.0	10.1

Forecast Revisions as of 27 Feb 2025	2025		2026		2027	
Prior data as of 18 Nov 2024	**Current**	**Prior**	**Current**	**Prior**	**Current**	**Prior**
Fair Value Estimate Change (Trading Currency)	88.00	87.88	—	—	—	—
Revenue (USD Mil)	10,451	10,165	10,930	10,558	11,431	11,039
Operating Income (USD Mil)	2,686	2,282	3,215	2,568	3,416	3,200
EBITDA (USD Mil)	4,258	3,984	4,463	4,184	4,677	4,386
Net Income (USD Mil)	3,059	2,779	3,153	3,027	3,310	3,243
Earnings Per Share (Diluted) (USD)	3.42	2.89	4.41	3.41	4.95	4.57
Adjusted Earnings Per Share (Diluted) (USD)	5.80	5.21	6.20	5.74	6.83	6.29
Dividends Per Share (USD)	1.51	1.44	1.59	1.51	1.67	1.59

Key Valuation Drivers as of 27 Feb 2025	
Cost of Equity %	7.5
Pre-Tax Cost of Debt %	5.8
Weighted Average Cost of Capital %	7.1
Long-Run Tax Rate %	20.0
Stage II EBI Growth Rate %	4.0
Stage II Investment Rate %	15.0
Perpetuity Year	15

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

Discounted Cash Flow Valuation as of 27 Feb 2025	**USD Mil**
Present Value Stage I	10,013
Present Value Stage II	15,761
Present Value Stage III	23,842
Total Firm Value	**49,616**
Cash and Equivalents	834
Debt	11,290
Other Adjustments	7,875
Equity Value	**47,035**
Projected Diluted Shares	538
Fair Value per Share (USD)	**88.00**

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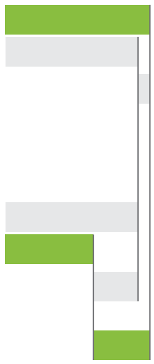
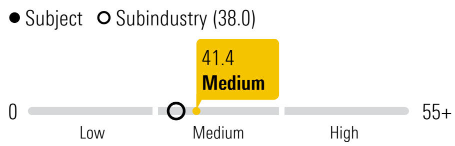
Fidelity National Information Services Inc FIS ★★★★ 5 May 2025 21:32, UTC

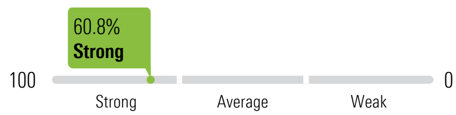
Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
78.32 USD 5 May 2025	88.00 USD 18 Nov 2024 20:59, UTC	0.89	39.89 USD Bil 6 May 2025	Narrow	Mid Blend	Medium	Standard	2 Apr 2025 05:00, UTC

ESG Risk Rating Breakdown

Exposure	
Company Exposure[1]	41.4
– Manageable Risk	38.0
Unmanageable Risk[2]	**3.4**
Management	
Manageable Risk	38.0
– Managed Risk[3]	23.1
Management Gap[4]	**14.9**
Overall Unmanaged Risk	**18.2**







- 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 60.8% 4. Management Gap assesses risks that are not managed, but are considered manageable 5. ESG Risk Rating Assessment = Overall Unmanaged Risk = Management Gap plus Unmanageable Risk

ESG Risk Rating Assessment[5]

ESG Risk Rating is of Apr 02, 2025. Highest Controversy Level is as of Apr 08, 2025. Sustainalytics Subindustry: Data Processing. Sustainalytics provides Morningstar with company ESG ratings and metrics on a monthly basis and as such, the ratings in Morningstar may not necessarily reflect current Sustainalytics' scores for the company. For the most up to date rating and more information, please visit: sustainalytics.com/esg-ratings/.

Peer Analysis 02 Apr 2025

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

Company Name	Exposure		Management		ESG Risk Rating	
Fidelity National ...ation Services Inc	41.4 | Medium	0 – 55+	60.8 | Strong	100 – 0	18.2 | Low	0 – 40+
Fiserv Inc	36.9 | Medium	0 – 55+	51.8 | Strong	100 – 0	19.2 | Low	0 – 40+
Global Payments Inc	30.0 | Low	0 – 55+	39.4 | Average	100 – 0	19.1 | Low	0 – 40+
Jack Henry & Associates Inc	31.6 | Low	0 – 55+	43.9 | Average	100 – 0	18.7 | Low	0 – 40+
Block Inc	34.2 | Low	0 – 55+	42.3 | Average	100 – 0	20.7 | Medium	0 – 40+

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Appendix
Historical Morningstar Rating

Fidelity National Information Services Inc FIS 5 May 2025 21:32, UTC

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

Fiserv Inc FI 5 May 2025 21:30, UTC

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

Global Payments Inc GPN 5 May 2025 21:30, UTC

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

Morningstar Equity Analyst Report | Report as of 6 May 2025 15:59, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC.

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

Research Methodology for Valuing Companies

Overview

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

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

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

1. Economic Moat

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

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

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

2. Estimated Fair Value

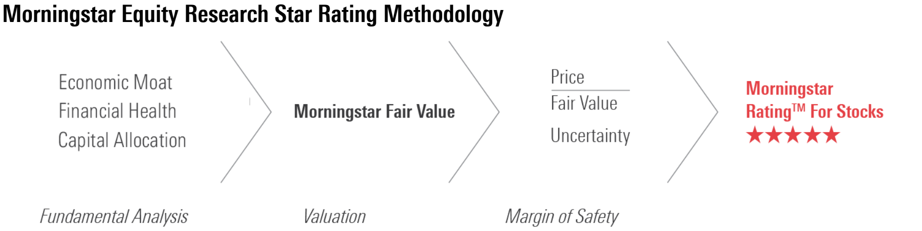
Combining our analysts' financial forecasts with the firm's economic moat helps us assess how long returns on invested capital are likely to exceed the firm's cost of capital. Returns of firms with a wide economic moat rating are assumed to fade to the perpetuity period over a longer period of time than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

Our model is divided into three distinct stages:

Stage I: Explicit Forecast

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

Morningstar Equity Research Star Rating Methodology



Stage II: Fade

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

Stage III: Perpetuity

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

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

3. Uncertainty Around That Fair Value Estimate

Morningstar's Uncertainty Rating is designed to capture the range of potential outcomes for a company's intrinsic value. This rating is used to assign the margin of safety required before investing, which in turn explicitly drives our stock star rating system. The Uncertainty Rating is aimed at identifying the confidence we should have in assigning a fair value estimate for a given stock.

Our Uncertainty Rating is meant to take into account anything that can increase the potential dispersion of future outcomes for the intrinsic value of a company, and any-

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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.

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

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

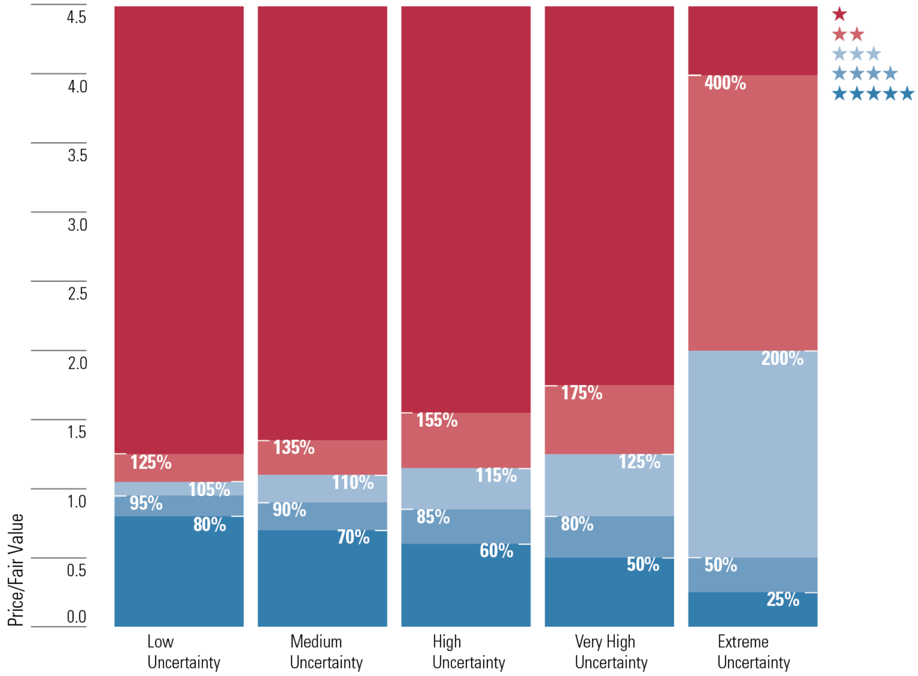
4. Market Price

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

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

Morningstar Star Rating for Stocks

Morningstar Equity Research Star Rating Methodology



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

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

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

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

The Morningstar Star Ratings for stocks are defined below:

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

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

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

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

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

Other Definitions

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

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

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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/

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

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