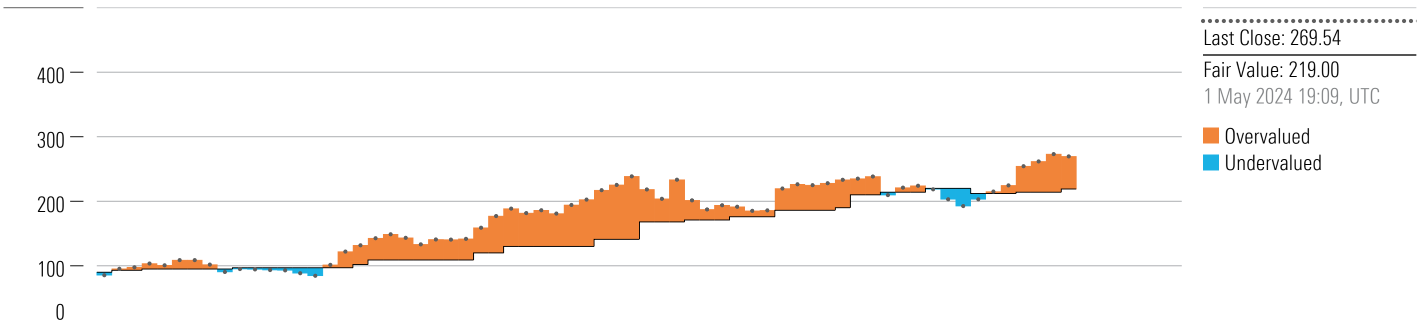
Morningstar Equity Analyst Report | Report as of 7 May 2024 15:57, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NASDAQ - ALL MARKETS

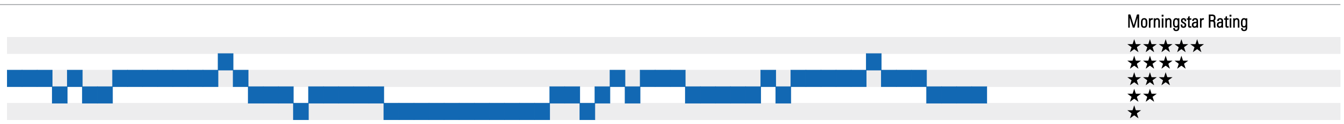
Tractor Supply Co TSCO ★★ 6 May 2024 21:16, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
269.54 USD 6 May 2024	219.00 USD 1 May 2024 19:09, UTC	1.23	29.09 USD Bil 6 May 2024	Wide	Mid Blend	Medium	Exemplary	1 May 2024 05:00, UTC

Price vs. Fair Value



	2019	2020	2021	2022	2023	YTD	
	0.96	1.29	1.69	1.21	1.01	1.23	Price/Fair Value
	13.61	52.05	71.21	-4.17	-2.59	25.86	Total Return %



Total Return % as of 6 May 2024. Last Close as of 6 May 2024. Fair Value as of 1 May 2024 19:09, UTC.

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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.

Tractor Supply's Continued Investment and Robust Loyalty Attracting Customers Amid Spending Hurdles

Business Strategy & Outlook Jaime M. Katz, CFA, Senior Equity Analyst, 1 May 2024

Tractor Supply is the largest consumer farm specialty retailer in the United States, surpassing $14.5 billion in sales in fiscal 2023. The firm has differentiated itself through its products and customer demographics, which provide underlying support to its brand intangible assets and wide economic moat. At the end of 2023, the store base had grown about 24% over the prior five-year period, to more than 2,400 locations, including 81 acquired locations from Orscheln and Petsense, driving sales and EPS compound annual growth rates over the past three years of 11% and 14%, respectively. We forecast that the firm will grow to over 3,200 stores by 2033 as it populates big-box centers in the western half of the US, with Petsense accounting for about 300 units.

The firm competes with big-box retailers like PetSmart and Lowe's, which also have solid pricing power because of scale and distribution advantages across numerous categories. Tractor Supply also has smaller regional peers that tend to lack its scale and expansive product mix. We believe Tractor Supply derives its success from its evolving customer-led store layout, which makes it a destination store for many of its customers. In addition, since the firm focuses on an active do-it-yourself rural consumer, many of its products are higher-end than those found in retailers that focus on a casual consumer.

We think that Tractor Supply has reached critical mass in its consumer segment, and better efficiency

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Sector	Industry
Consumer Cyclical	Specialty Retail

Business Description

Tractor Supply is the largest operator of retail farm and ranch stores in the United States. The company targets recreational farmers and ranchers and has little exposure to commercial and industrial farm operations. Currently, the company operates 2,233 of its namesake banners in 49 states, including 81 Orscheln Farm and Home stores (rebranded as Tractor Supply), along with 202 Petsense by Tractor Supply stores. Stores are generally concentrated in rural communities, as opposed to urban and suburban areas. In fiscal 2023, revenue consisted primarily of livestock, equine & agriculture (27%), companion animal (25%), and seasonal & recreation (22%).

gains ahead from category expansions like side lot and fusion format store updates should help elevate the sales and profit growth. Better customer attribution data, improved bargaining power with vendors, and more sophisticated logistics should also improve inventory levels and cash conversion. Additionally, stable gross margins thanks to strong private-label penetration and operating cost leverage from scale should help operating margins average 10.5% throughout our forecast. Despite the strides made, investments to improve the customer experience could limit near-term operating margin upside; capital expenditures will likely remain elevated over the medium term as the firm invests to fuel growth.

Bulls Say Jaime M. Katz, CFA, Senior Equity Analyst, 1 May 2024

- Tractor Supply has room for store growth, which should help it achieve high-single-digit EPS growth over the next decade (in line with the 8%-11% it expects). A quicker-than-expected rollout of side lot projects could lead to faster sales growth than we expect.
- A unique merchandise assortment partially insulates the firm from e-commerce competitors, offering products that have either immediate need or are expensive to ship.
- With its distribution network continuing to evolve, Tractor Supply should be able to leverage logistics expenses better, leading to improving distribution costs.

Bears Say Jaime M. Katz, CFA, Senior Equity Analyst, 1 May 2024

- Competition is fierce throughout retail, and Tractor Supply will have to innovate to keep its market leadership position and ensure elevated brand relevance.
- Optimal real estate opportunities could become more difficult to capture as the firm expands further into competitors' markets and if real estate prices rise in prospective regions.
- Free cash flow could be tempered in the near term as the firm increases its capital expenditures to roll out the project fusion and side lot initiatives, expand the store footprint, build out the distribution network, and invest in IT.

Economic Moat Jaime M. Katz, CFA, Senior Equity Analyst, 1 May 2024

We have assigned a wide economic moat rating to Tractor Supply, which stems from its brand intangible asset, thanks to investments that enhance its differentiated one-stop-shop model. First, the firm's expansion of its unique product mix deepens entrenchment with its underserved consumers and allows Tractor Supply to capture a greater share of its consumers' wallets through higher average transaction sizes. Likewise, higher-margin private-label continues to represent a healthy percentage of sales, leaving consumers tied to brands exclusively sold at Tractor Supply at attractive price points. Second, the firm's brand has strengthened through investments in its omnichannel capabilities, loyalty program, footprint expansion, digital proficiency, and customer service, deepening the divide between Tractor Supply and its regional competitors. All in, we contend these factors help solidify Tractor Supply's position, a first mover in the national outdoor retail space, limiting the appeal for competitors to enter the market. As such, Tractor Supply has delivered consistent results, while the competitive

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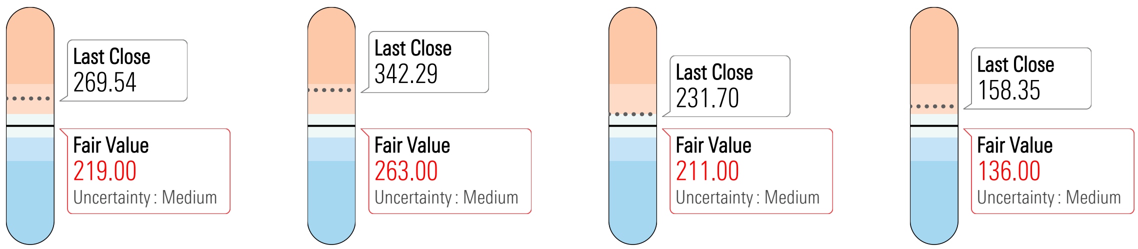
Competitors



	Tractor Supply Co TSCO	The Home Depot Inc HD	Lowe's Companies Inc LOW	Target Corp TGT
Economic Moat	Wide	Wide	Wide	None
Currency	USD	USD	USD	USD
Fair Value	219.00 1 May 2024 19:09, UTC	263.00 15 Aug 2023 19:00, UTC	211.00 1 Mar 2024 18:50, UTC	136.00 26 Mar 2024 02:46, UTC
1-Star Price	295.65	355.05	284.85	183.60
5-Star Price	153.30	184.10	147.70	95.20
Assessment	Overvalued 6 May 2024	Overvalued 6 May 2024	Overvalued 6 May 2024	Overvalued 6 May 2024
Morningstar Rating	★★6 May 2024 21:16, UTC	★★6 May 2024 21:16, UTC	★★6 May 2024 21:16, UTC	★★6 May 2024 21:16, UTC
Analyst	Jaime M. Katz, Senior Equity Analyst	Jaime M. Katz, Senior Equity Analyst	Jaime M. Katz, Senior Equity Analyst	Noah Rohr, Equity Analyst
Capital Allocation	Exemplary	Exemplary	Exemplary	Exemplary
Price/Fair Value	1.23	1.30	1.10	1.16
Price/Sales	2.01	2.25	1.57	0.68
Price/Book	13.70	324.92	321.82	5.45
Price/Earning	26.25	22.65	17.55	17.71
Dividend Yield	1.55%	2.49%	1.90%	2.77%
Market Cap	29.09 Bil	339.22 Bil	132.58 Bil	73.26 Bil
52-Week Range	185.00—279.38	274.26—396.87	181.85—262.49	102.93—181.86
Investment Style	Mid Core	Large Core	Large Value	Large Value

environment has not moved against the firm. Successful merchandising has allowed Tractor Supply to deliver average adjusted ROIC of 21% over the past five years, or about 1,200 basis points above our assumed WACC. We forecast comparable levels to ensue over the next decade.

We believe Tractor Supply's expanded product assortment and positioning in less densely populated regions provides the firm with structural advantages over fragmented, regional competitors. At its core, Tractor Supply rigorously adheres to its consumer base's “Out Here” lifestyle in product assortment, which allows the brand to deeply resonate with underserved recreational farmers, ranchers, and rural customers (bolstered by unique grassroots experiences like Chick Days), in our opinion. Through Tractor Supply's perpetual evolution aimed at adding greater value to the outdoor hobbyist consumer, the brand has bolstered its awareness. Over the past five years, efforts including over 900 in-store pet washing centers, PetVet clinics, pet insurance, and TSC Rx (pet and livestock prescriptions) have helped further engage customers, resulting in nearly 32% higher transaction values. Additionally, Tractor Supply has secured exclusive selling rights to several products from industry-leading manufacturers, some of which include Bosch, DeWalt, Porter-Cable, and Makita. Further value creation stems from transforming the

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company's side lots to create outdoor garden centers. Currently, around 500 stores (22%) have garden centers, and 70% of locations should be operating with the offering by 2026. For reference, outdoor garden represented $10.3 billion in sales at Home Depot in 2023, and according to Tractor Supply represents a $20 billion total addressable market opportunity. In our view, greater product selection should facilitate larger ticket growth and appeal to a broader customer base.

Additionally, we believe Tractor Supply's consistently demanded strong suite of private-label offerings add to its intangible assets, elevating its brand. Private label provides customers with exclusive, in-demand products at attractive price points by utilizing dynamic pricing. Coupled with a good, better, and best strategy across categories, Tractor Supply can engage consumers at different price points. These products helped deliver 290 basis points of incremental gross margin between 2010-23, but products can boast profitability more than 300 basis points above national brands. And the firm has successfully grown its private-label penetration to 30% of sales in 2023 from 21% in 2010. While Tractor Supply offers over 20 private-label brands across all product segments, private-label penetration in consumable, usable, and edible (C.U.E.) products strikes us as one of the most significant factors driving consumer stickiness. We believe regularly used products—pet food, livestock feed, and pest control—propel consumers to make frequent replacement purchases and are less frequently substituted.

Although omnichannel efforts are pervasive across the retail landscape, we commend Tractor Supply for developing its capabilities early. The firm incorporated a buy online pickup in store, or BOPIS, option prior to the pandemic, contributing to its customer engagement. In the first quarter of 2024, 80% of digital transactions utilized the BOPIS system, driving in-store traffic, or were fulfilled by a store. For example, fulfillment of a needs-based BOPIS trip exposes consumers to Tractor Supply's expansive product mix, driving sales in adjacent categories. Increased traffic emphasizes the value behind having a brick-and-mortar presence along with technological capabilities, especially when considering the premium cost required to ship large or heavy products to homes. Tractor Supply has experienced significant e-commerce growth, exceeding $1 billion in digital sales in fiscal 2023. This represents a high-single-digit percentage of Tractor Supply's total sales, substantially surpassing the farm and ranch retail industry's average of approximately 1%. Highlighting this success, an impressive 40% rise in app downloads, amassing a total of 7 million by the end of 2023. We believe this protects Tractor Supply's competitive position and prevents customer attrition as customers can buy what they want how they want.

Impeccable customer service also supports Tractor Supply's brand, in our opinion. Associates advise consumers on animal and property care given their knowledge of Tractor Supply's specialized product assortment. Stellar customer service stems from internal cultural initiatives over time. Recent endeavors, such as Project Fusion and ONETractor (omnichannel) should support customer satisfaction. Project Fusion provides consumers with improved store layouts, displays, and finishes while expanding product selections. In stores adopting this rollout, including an added garden center, locations have seen an average high-single-digit increase in comparable sales, in contrast to the flat companywide comparable sales in 2023. ONETractor provides a more seamless customer experience through digital stockyard kiosks and enhanced CRM (customer relationship management). As such, Tractor Supply has been able to capture purchase driver metrics ahead of the industry benchmarks in team member friendliness, speed and ease of checkout, and team member knowledge with scores of 63%, 60%, and 50%, respectively. For reference, industry averages fall at 55%, 50%, and 43%. We believe newer initiatives, such as Hey GURA (a generative AI tool designed to provide knowledge to associates), should further improve the firm's leading customer service metrics. Ultimately, these efforts highlight Tractor Supply's willingness to cater to evolving consumer shopping preferences to protect its market share leadership.

Brand gains also stem from the enhanced private-label credit card, the addition of mixing centers (to improve in-stock levels of inventory), and a robust loyalty program. Credit card data offers visibility into localized purchasing patterns of different demographics, allowing for optimal merchandising, which benefits Tractor Supply. But the firm's private-label credit card also offers an attractive 5% discount on purchases, well above that offered at competitors Fleet Farm and Blain's Farm & Fleet. And the Neighbor's Club loyalty program, which now boasts over 34 million members, offers insight into the behavior of Tractor Supply's best customers to ensure appropriate product availability. Over 75% of total sales stem from loyalty members, which spend 3 times more than non-members and exhibit a topnotch 97% retention rate.

We believe that Tractor Supply's investments across initiatives help maintain its top position in the outdoor lifestyle market and stay relevant to its consumer base. Likewise, wide-moat Home Depot nearly doubled its business-as-usual capital expenditure from 2018-20 to deliver similar improvements (in store formats and associates, products, and supply chain) to its respective proficiencies, indicating the need for market leaders to invest to remain competitive.

In considering the competitive landscape, we think Tractor Supply is protected from brand erosion from new entrants for a few reasons. To start, we surmise the capital investment required to enter the playing field makes the endeavor unattractive. For a competitor to open 1,000 boxes, we estimate the firm would require at least $130 million in capital to finance pre-opening costs just related to payroll and rent (implied by pre-opening costs divided by new stores). But we note even with Tractor Supply's success over the last decade, there have been no competitors that have grown to become an increasing threat—in fact, the nearest similar peer, Menard's, still has only around 350 locations and remains regionally based in the Midwest.

In addition, even if a peer could scale locations, we suspect the entrant would have to pay a premium to steal or attract and train talent to at least reach the benchmark in customer service, particularly when

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labor is constrained. On top of that, a national competitor would have to either find existing, or build new, strategically located distribution facilities to keep pace with fast-turning C.U.E. inventory and a wide geographic footprint. Aside from additional costs related to distribution, potentially limited real estate availability and an industry incumbent often could limit an entrants' ability to scale adequately. Here, an outsider could struggle to secure the vendor relationships necessary to support the scale of the business quickly, given the relative uncertainty tied to forging contracts with unproven, incoming players. Altogether, we believe the lack of a differentiated product assortment, wide footprint, and superior customer service levels will remain challenging factors for competitors to overcome.

Fair Value and Profit Drivers Jaime M. Katz, CFA, Senior Equity Analyst, 1 May 2024

We are raising our fair value estimate for Tractor Supply to $219 per share from $214. This adjustment primarily reflects the time value of money benefit, following our review of Tractor Supply's fiscal 2024 first-quarter results, which came near our expectations. During the period, the retailer's comparable sales rose by 1.1%, fueled by a 1.3% increase in customer traffic, which slightly outweighed a modest 0.2% decrease in average basket size. At the same time, EPS of $1.83 slightly outpaced our $1.75 projection. Given the solid performance, management continues to estimate a 1% decline to a 1.5% rise in comparable sales and projects $9.85-$10.50 in EPS for fiscal 2024, which falls in line with our 1% growth and $10.25 forecasts, respectively. Ultimately, we anticipate 40 basis points of gross margin expansion, driven by supply chain efficiencies, diligent cost management, and an improved sales mix (a more favorable mix of seasonal items relative to C.U.E.). As an offset, we expect an increase in SG&A expenses as a percentage of sales as the company progresses on its strategic investments at both the store level and in distribution. Coupled with higher depreciation and amortization expenses than we anticipated, we project operating margins to decline to 9.9% from 10.2% in 2023, which aligns with management's forecast of 9.7%-10.1%. Overall, we are pleased that Tractor Supply continues to progress on its core initiatives centered on remodeling stores, building out garden centers, and completing the integration of newly acquired Orscheln stores, while boasting strong needs-based C.U.E. growth. Our fair value estimate implies a 2024 price/earnings ratio of 21 times and a 2024 enterprise value/EBITDA multiple of 12 times.

Longer term, we view the expanding breadth of its offerings (side lot repositioning to include lawn and garden), potential for growth of its current consumer base, and increased penetration of new consumers as positive factors that could drive top-line growth. Over the medium term (next five years) we project that total sales can grow at an average of 6%, supported by 3.4% comparable-store sales, about 3% average square footage growth, and improving productivity. We forecast gross margins to rise modestly over the next decade, constrained by our belief that e-commerce retailers can compete in about 30% of the sales areas Tractor Supply operates in and the everyday-low-price strategy. We forecast the selling, general, and administrative expense ratio remain flattish at the end of our forecast

(23.6%) as the business continues to invest to maintain its leadership position in the outdoor enthusiast segment and onboards new distribution centers to extract efficiencies. Our model assumes 60 basis points of operating margin improvement from 2023 over the next decade, as consistent improvements in the supply chain and merchandising are largely offset by elevated investment to remain a best in class retailer. Over the long term, we project a 18% average rate of return on invested capital rate versus our 9% cost of capital assumption, providing quantitative support for our wide economic moat view.

Risk and Uncertainty Jaime M. Katz, CFA, Senior Equity Analyst, 1 May 2024

We've assigned Tractor Supply a Medium Uncertainty Rating despite operating in a cyclical retail environment in which consumers' spending habits in large part drive sales. Tractor Supply's target demographic is fairly affluent, which helps insulate the firm somewhat during a recession (generating same-store sales of 1% in 2008, negative 1% in 2009, and 23% in 2020). While some segments of the business could be swayed by weather (lawn and garden, heating) or the performance of the housing market (apparel, tools), we think sales from the C.U.E. product aisles, including pet food, livestock, and equine categories, should offer stability in the revenue cycle.

In markets and product categories that Tractor Supply overlaps with other big-box retailers (Lowe's, PetSmart, Walmart), we think the company could be forced to be a price taker, which could weigh on local profits. Additionally, there are no barriers to entry to prevent new competitors from operating in any of the firm's markets, although it's difficult for us to see how a smaller, less nimble business would be able to offer similar product prices, as it probably would not have vendor relationships of the same strength. With our forecast for over 2,900 Tractor Supply and 300 Petsense stores by 2033, the firm risks oversaturation and cannibalization of sales in established locations, however, we expect some localized merchandise selection could prevent this.

Some risk lies in competition from the e-commerce channel, particularly in categories that have been commodified. The biggest risk, in our opinion, is a slowdown in domestic economic growth, which could lead to declines in home sales pricing, higher unemployment, or slowing income growth levels. We believe risk stemming from environmental, social, and governance concerns is manageable, as the factors with most materiality (higher cost of wages and turnover, as well as higher energy costs) still provide low risk to economic profits.

Capital Allocation Jaime M. Katz, CFA, Senior Equity Analyst, 1 May 2024

Our capital allocation rating for Tractor Supply is Exemplary. Adjusted returns on invested capital, including goodwill (25% on average over the last 10 years) have handily outpaced our weighted cost of capital estimate (at 9%). Moreover, the balance sheet remains sound, given the company's low absolute debt level, medium revenue cyclicality, and operating leverage. Net debt/EBITDA should average below 1 times over the next decade, and near-term capital demands remain minimal.

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Former Macy’s president Hal Lawton became CEO of Tractor Supply in January 2020. We think Lawton was chosen for his wide expertise across retailing, most recently directing merchandising, marketing, stores, operations, and more at Macy’s. More important, his extensive e-commerce experience, with both eBay and Home Depot, could help Tractor Supply better monetize its omnichannel presence (digital sales accounted for a high-single-digit percentage of sales in 2023, up from around 2%-3% at the end of 2019).

We hold a positive view of Tractor Supply's investment strategy, as we see the company is spending strategically to maintain its competitive advantages and respond rapidly to evolving demand. Despite the hiccup when re-evaluating Petsense's long-term opportunity set (which resulted in an impairment), active spending on potentially lucrative expansion categories (garden and outdoor, for example) should more than offset such missteps. Quantitatively, we believe this is supported by robust ROIC (including goodwill) and improving operating margin performance (averaging 10.5% over our forecast).

We deem cash distributions as appropriate, with the management team returning capital to shareholders when optimal. As such, it suspended share repurchases early in the covid cycle but has resumed opportunistic purchases given the strong demand that has persisted over the last year (providing such flexibility). Additionally, Tractor Supply has consistently raised its dividend in recent years, most recently lifting the payout by 7% to $1.10 per quarter, in an effort to return excess capital to shareholders.

Analyst Notes Archive

Tractor Supply Earnings: Brand Investments Strengthen Execution and Boost Traffic Jaime M. Katz, CFA, Senior Equity Analyst, 25 Apr 2024

Wide-moat Tractor Supply drove sturdy first-quarter results in line with our expectations, bucking softer spending by lower-income consumers and benefiting from steadier weather conditions. Comparable sales increased 1.1%, aligning with our estimate, driven by positive traffic (up 1.3%) that was partially offset by a 0.2% decline in average basket size despite modest product cost deflation. Sales were buoyed by higher spending on big-ticket and seasonal categories amid stable weather. Aiding traffic, Tractor Supply tapped its arsenal of 34 million loyalty members (constituting 75% of sales) by accelerating reward redemptions and providing more personalized offers, showcasing its ability to engage consumers through its strong brand. Despite tactical marketing and investment in key initiatives, operating margin improved 40 basis points to 7.8%, near our 7.6% outlook, thanks to solid productivity and cost management. With management maintaining its fiscal 2024 outlook for a 1% decline to 1.5% rise in comparable sales and a 9.7%-10.1% operating margin, we see no reason to materially alter our $214 fair value estimate. We view the shares as rich.

Although macroeconomic pressures persist and the firm is facing a moderation in pet adoption trends, we believe Tractor's Supply's everyday low pricing and one-stop-shop model continue to lure consumers to its stores, while more recent population growth in rural areas suggests its consumer base is broadening. Tractor Supply's scale and digital prowess also stand out relative to smaller regional peers, with investments yielding strong results. Digital orders grew by double digits in the quarter, with 80% picked up in or delivered by stores and 20% conducted via the app. Overall, the expansion of the company's 500 garden centers and 900 pet washing stations, coupled with store layout improvements, underpins our long-term expectation for 4% annual growth in comparable-store sales.

Tractor Supply Earnings: Steady Demand for Consumables Retains Consumers Despite Cautious Spending Jaime M. Katz, CFA, Senior Equity Analyst, 1 Feb 2024

Despite industrywide challenges from subdued consumer discretionary spending and atypical weather patterns, wide-moat Tractor Supply posted solid results, falling just ahead of our estimates. In the fourth quarter, comparable sales fell by 4.2%, edging our expectation for a 7% decline. Impressively, this comes after an 8.6% increase in the same period last year, which was boosted by an additional selling week and a 200-basis-point benefit from favorable weather conditions. Anchoring sales resilience, Tractor Supply's needs-based consumable, usable, and edible category continued to achieve positive comparable metrics, drawing in shoppers as interest in cold weather, discretionary, and big-ticket items waned, thereby limiting transaction declines to just 2.7%. Despite a shift to lower-margin products, gross margin increased by 129 basis points to 35.3%, ahead of our 34.5% projection, buoyed by lower transportation rates (which should not continue) and enhanced distribution efficiencies stemming from its new distribution center. Moreover, even with elevated investment, the firm's operating margin remained consistent with our 9% estimate.

For fiscal 2024, the challenges posed by an uncertain macroeconomic landscape led the firm to offer an outlook a tad lower than our estimates. We plan to nudge down our estimates of $15.3 billion in sales, 2% growth in comparable sales, and a 10.2% operating margin to better align with management's guided ranges of $14.7 billion-$15.1 billion, a 1% decrease to 1.5% jump, and 9.7%-10.1%, respectively. While the firm's forecast for comparable sales growth falls short of its long-term target of 4%-5%, we believe its strategy to expand product offerings, remodel stores, and enhance its e-commerce platform should bolster our expectation for 4% average growth beyond fiscal 2024. Ultimately, we don't plan any material change to our $212 fair value estimate and view shares as fairly valued.

Tractor Supply Earnings: Execution Holds as Weaker Spending and Unusual Weather Persist Jaime M. Katz, CFA, Senior Equity Analyst, 26 Oct 2023

Wide-moat Tractor Supply delivered resilient third-quarter results, which fell largely within our expectations. Despite declines in big ticket (down a mid-single-digit percentage) and seasonal purchases due to waning discretionary spending and unseasonably warm weather, comparable sales were essentially flat, just shy of our 1% forecast. We believe Tractor Supply's higher-income consumer base, promotional capabilities, and needs-based consumable, usable, and edible fare make the firm less susceptible than some peers to broader macroeconomic woes and weather volatility. As evidence, even with the mix shift away from higher-margin big ticket items, its gross margin improved by 110 basis points to 36.7% (near our 36.2% estimate) from 35.6% thanks to expanded distribution capabilities and lower transportation costs. Further, a 10% operating margin fell in line with our assumption, as the firm prudently managed costs during a period of heightened investment and cost deleverage.

That said, management cautiously opted to nudge down its fiscal 2023 guidance, as consumers remain judicious with their wallets, while a warmer winter could further pressure its fourth-quarter results. Tractor Supply now anticipates flat comparable sales growth (from 1.3%-2.5% prior) and $10.00-$10.10 in EPS (from $10.20-$10.40). We intend to lower our respective 1.7% and $10.36 forecasts to be closer to the guided range to account for economic uncertainty and a 200-basis-point comparable sales growth benefit from severe winter weather and a 53rd week in fiscal 2022. Also, since we suspect discretionary spending will remain under pressure, we intend to push down our 4% fiscal 2024 comparable sales forecast. As such, we plan to lower our $220 fair value estimate by a mid-single-digit percentage, mirroring the market's reaction on Oct. 26. Longer term, we continue to expect comparable sales to grow by 4% per year, bolstered by expanded adjacent opportunities such as the addition of garden centers.

Tractor Supply Earnings: Plan to Expand Footprint Offsets Near-Term Consumer Spending Woes

Jaime M. Katz, CFA, Senior Equity Analyst, 27 Jul 2023

Weakening discretionary spending and unseasonal weather pinched wide-moat Tractor Supply's second-quarter results, which were a touch behind our expectations. Comparable store sales rose 2.5%, shy of our 5% estimate, but sales growth of 7.2% to $4.2 billion was near our $4.3 billion estimate. Declines in big ticket and impulse purchases fueled lighter performance, as wallet-stretched consumers continue to combat diminishing savings and persistent inflation. That said, Tractor Supply's needs-based consumable, usable, and edible (C.U.E.) category outpaced the firm's average and contributed to a 1.8% bump in comparable store transactions. Even with the mix shift away from higher-margin big-ticket items, gross margin rose 69 basis points to 36.2%, near our 35.9% assumption, thanks to lower transportation costs. Despite heightened integration costs around Orscheln, a 13.4% operating margin was in line with our 13.3% estimate.

As a result of first-half results and current conditions, management lowered its 2023 comparable sales growth and EPS guidance to 1.3%-2.5% from 3.5%-5.5% and $10.20-$10.40 from $10.30-$10.60, respectively. We intend to lower our respective $15.3 billion and $10.56 estimates given an uncertain macroeconomic environment. Offsetting this pressure is a higher annual store growth outlook that includes 80 new stores in 2024 and 90 openings per year thereafter, as the firm's new long-term location target was lifted to 3,000 (200 incremental stores). Our longer-term store growth trajectory is

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Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
269.54 USD 6 May 2024	219.00 USD 1 May 2024 19:09, UTC	1.23	29.09 USD Bil 6 May 2024	Wide	Mid Blend	Medium	Exemplary	1 May 2024 05:00, UTC

modestly slower than the firm expects, bound by our concern about Tractor Supply's ability to locate optimal real estate opportunities at competitive prices. Moreover, startup costs could lead to expense deleverage and inefficiencies as the distribution network grows to accommodate more stores. With all these factors considered, we don't plan any material change to our $214 fair value estimate and view shares as fairly valued.

Tractor Supply Earnings: Sour Start to Spring Weather Delays Seasonal Spending, Clouds Profitability Jaime M. Katz, CFA, Senior Equity Analyst, 27 Apr 2023

Wide-moat Tractor Supply tussled with an unusually wet and cool start to the spring selling season, crimping its first-quarter earnings. The company estimates weather lowered comparable sales growth by 200 basis points to 2.1% (shy of our 3% estimate), led by a slowdown in the larger-ticket, discretionary seasonal category. Even so, its gross margin ticked up 52 basis points to 35.5% thanks to moderating freight costs, pricing, and margin-driving initiatives. However, deleverage from softer sales and strategic stepped-up initiative spending lowered Tractor Supply's operating margin by 70 basis points to 7.4%, below our 7.9% assumption. Aside from weather, we suspect macroeconomic uncertainty also continues to weigh on consumers' discretionary (15% of sales) purchasing decisions. Fortunately, as a testament to the essential nature of Tractor Supply's pet and animal feed portfolio, its needs-based consumable, usable, and edible, or C.U.E., category continued to display strength and drive customer trips, helping to lift comparable average ticket growth by 2.8% even as transactions slid a modest 0.7% because of the weather.

Against the backdrop of strong C.U.E sales, delayed seasonal demand, and skewed year-over-year comparisons for the second quarter (performance hindered by drought in fiscal 2022), management noted that current quarter-to-date comparable sales are trending up in the mid-single digits with positive transaction volume, leading the firm to reiterate its fiscal 2023 guidance for 3.5%-5.5% comparable sales growth and 10.1%-10.3% operating margins, in line with our 4% and 10.1% estimates, respectively. As such, we don't plan a material change to our $210 fair value estimate and view shares as rich despite a low-single-digit drop in share price on the report. Our long-term prognosis is unchanged, and we continue to believe Tractor Supply's brand and cost synergies will drive efficiency and loyalty, enabling share gains in a largely fragmented market.

Tractor Supply's Strong Brand, Competitive Positioning Propel Wide Economic Moat Designation Jaime M. Katz, CFA, Senior Equity Analyst, 6 Mar 2023

We are raising our economic moat rating for Tractor Supply to wide from narrow thanks to investments that enhance its differentiated one-stop-shop model, giving us greater confidence in the strength of its brand intangible asset.

First, Tractor Supply's unique product mix, critical to its rural consumers, has expanded with the

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Tractor Supply Co TSCO ★★ 6 May 2024 21:16, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
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addition of PetVet Clinics, garden centers, exclusive products, and more, allowing the firm to capture a greater share of wallet and deepen entrenchment with its core customers. Simultaneously, higher-margin private-label sales have risen to 30% of total sales from 21% in 2010, tying consumers to Tractor Supply's well-priced internal brands.

Second, we believe investments in omnichannel, loyalty initiatives, footprint, and customer service have strengthened Tractor's brand and deepened the divide between the firm and its regional competitors. With 28 million loyalty members, over 2,300 total boxes, and stellar service metrics, we believe Tractor Supply benefits from superior customer attribution data, visibility, and topnotch retention rates, limiting the appeal for competitors to challenge the firm's positioning as a first mover in national outdoor retail. We surmise entry would require significant capital investment to attract talent and obtain or construct strategically located distribution facilities and stores, while constraints in real estate availability and forging vendor relationships limit its appeal. As such, Tractor Supply has delivered consistent economic profits (ROIC five-year historical average of 14%, above our 9% WACC), which we expect to persist over the 20-year horizon implied by our wide moat rating.

With the rating change, our fair value estimate rises to $210 per share from $190, attributable to a generation of economic rents for a longer period. Our long-term forecast otherwise remains intact. We expect Tractor Supply to average 4% comparable growth and 80 basis points of operating margin expansion through 2032.

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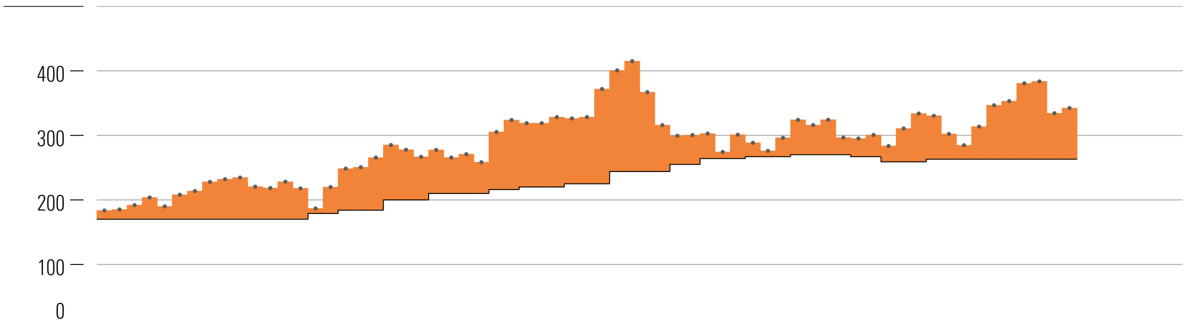
Tractor Supply Co TSCO ★★ 6 May 2024 21:16, UTC

Competitors Price vs. Fair Value

The Home Depot Inc HD



Last Close: 342.29

Fair Value: 263.00
15 Aug 2023 19:00, UTC

Overvalued
Undervalued

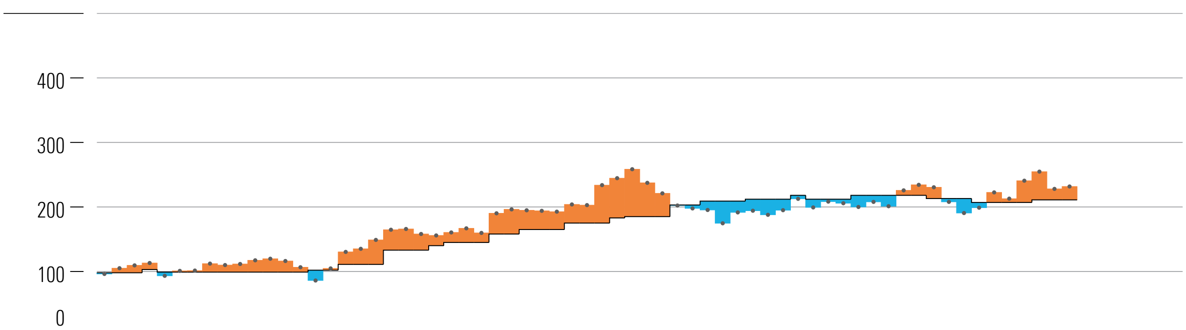
	2019	2020	2021	2022	2023	YTD	
	1.28	1.26	1.70	1.17	1.32	1.30	Price/Fair Value
	30.26	24.38	58.73	-22.06	12.36	-0.58	Total Return %

Morningstar Rating

★★★★★
★★★★
★★★
★★
★

Total Return % as of 6 May 2024. Last Close as of 6 May 2024. Fair Value as of 15 Aug 2023 19:00, UTC.

Lowe's Companies Inc LOW



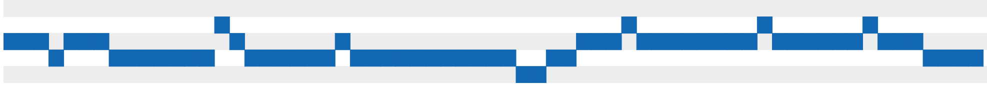
Last Close: 231.70

Fair Value: 211.00
1 Mar 2024 18:50, UTC

Overvalued
Undervalued

	2019	2020	2021	2022	2023	YTD	
	1.21	1.11	1.40	0.94	1.08	1.10	Price/Fair Value
	31.90	35.91	62.78	-21.49	13.86	5.10	Total Return %

Morningstar Rating



★★★★★
★★★★
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★★
★

Total Return % as of 6 May 2024. Last Close as of 6 May 2024. Fair Value as of 1 Mar 2024 18:50, UTC.

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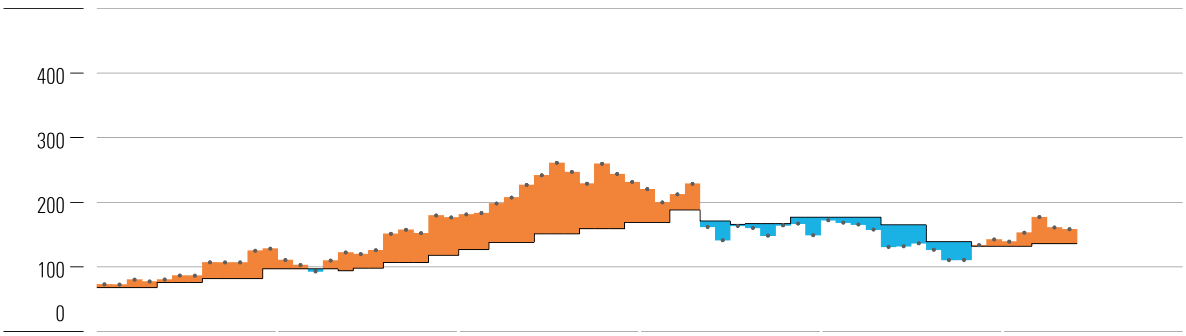
Tractor Supply Co TSCO ★★ 6 May 2024 21:16, UTC

Target Corp TGT



Last Close: 158.35

Fair Value: 136.00

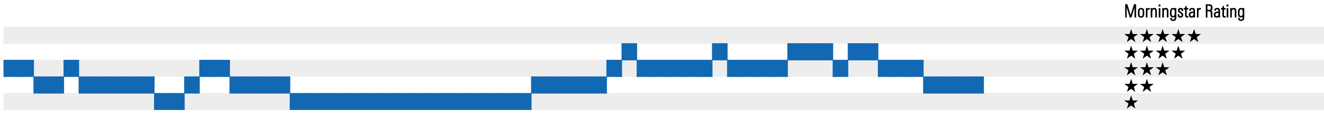
26 Mar 2024 02:46, UTC

Overvalued

Undervalued

	2019	2020	2021	2022	2023	YTD	
	1.32	1.50	1.37	0.84	1.08	1.16	Price/Fair Value
	97.93	39.78	32.90	-33.89	-1.52	11.96	Total Return %

Morningstar Rating



Total Return % as of 6 May 2024. Last Close as of 6 May 2024. Fair Value as of 26 Mar 2024 02:46, UTC.

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Morningstar Historical Summary

Financials as of 31 Dec 2023

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	TTM
Revenue (USD Bil)	5.71	6.23	6.78	7.26	7.91	8.35	10.62	12.73	14.20	14.56	14.56	14.56
Revenue Growth %	10.6	9.0	8.9	7.0	9.0	5.6	27.2	19.9	11.6	2.5	2.5	2.5
EBITDA (USD Mil)	704	774	837	852	879	939	1,214	1,577	1,778	1,872	1,872	1,872
EBITDA Margin %	12.3	12.4	12.4	11.7	11.1	11.3	11.4	12.4	12.5	12.9	12.9	12.9
Operating Income (USD Mil)	589	651	694	686	702	743	1,066	1,307	1,435	1,479	1,479	1,479
Operating Margin %	10.3	10.5	10.2	9.5	8.9	8.9	10.0	10.3	10.1	10.2	10.2	10.2
Net Income (USD Mil)	371	410	437	423	532	562	749	997	1,089	1,107	1,107	1,107
Net Margin %	6.5	6.6	6.5	5.8	6.7	6.7	7.0	7.8	7.7	7.6	7.6	7.6
Diluted Shares Outstanding (Mil)	139	137	134	128	123	121	117	116	112	110	110	110
Diluted Earnings Per Share (USD)	2.66	3.00	3.27	3.30	4.31	4.66	6.38	8.61	9.71	10.09	10.09	10.09
Dividends Per Share (USD)	0.61	0.76	0.92	1.05	1.20	1.36	1.50	2.08	3.68	4.12	4.12	4.12

Valuation as of 30 Apr 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Recent Qtr	TTM
Price/Sales	2.0	1.9	1.6	1.3	1.3	1.4	1.7	2.3	1.9	1.6	2.0	2.0
Price/Earnings	31.2	28.6	24.0	22.2	20.5	20.5	21.8	30.5	24.4	21.0	25.9	26.6
Price/Cash Flow	27.5	24.2	22.2	13.9	16.1	15.1	11.8	22.0	28.5	14.2	21.6	19.0
Dividend Yield %	0.77	0.89	1.21	1.4	1.44	1.46	1.07	0.87	1.64	1.92	1.6	1.53
Price/Book	8.7	8.6	6.8	6.8	6.8	7.4	8.7	13.4	12.8	11.0	13.1	13.9
EV/EBITDA	15.4	15.0	12.2	11.6	12.2	14.8	15.4	18.9	16.1	14.9	0.0	0.0

Operating Performance / Profitability as of 31 Dec 2023

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	TTM
ROA %	18.8	18.6	17.3	15.3	17.9	13.4	12.1	13.5	13.4	12.5	12.5	12.5
ROE %	29.2	30.6	30.7	29.4	35.7	35.9	42.9	50.8	53.8	52.8	52.8	52.8
ROIC %	29.2	28.8	26.6	23.7	28.2	18.4	15.8	17.9	18.2	16.9	16.9	16.9
Asset Turnover	2.9	2.8	2.7	2.6	2.7	2.0	1.7	1.7	1.7	1.6	1.6	1.6

Financial Leverage

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Recent Qtr	TTM
Debt/Capital %	0.4	10.7	16.6	23.4	20.8	60.5	62.7	64.2	65.8	68.5	68.5	—
Equity/Assets %	63.6	58.8	54.3	49.5	50.6	29.6	27.3	25.8	24.1	23.4	23.4	—
Total Debt/EBITDA	0.0	0.2	0.4	0.5	0.5	2.9	2.9	2.5	2.4	2.7	2.7	—
EBITDA/Interest Expense	373.6	267.6	144.1	61.5	47.9	47.3	42.2	59.3	58.1	40.2	40.2	40.2

Morningstar Analyst Historical/Forecast Summary as of 01 May 2024

Financials

			Estimates		
Fiscal Year, ends 30 Dec 2023	2022	2023	2024	2025	2026
Revenue (USD Mil)	14,205	14,556	14,893	15,843	16,893
Revenue Growth %	11.6	2.5	2.3	6.4	6.6
EBITDA (USD Mil)	1,778	1,872	1,910	2,016	2,158
EBITDA Margin %	12.5	12.9	12.8	12.7	12.8
Operating Income (USD Mil)	1,435	1,479	1,470	1,604	1,770
Operating Margin %	10.1	10.2	9.9	10.1	10.5
Net Income (USD Mil)	1,089	1,107	1,100	1,170	1,286
Net Margin %	7.7	7.6	7.4	7.4	7.6
Diluted Shares Outstanding (Mil)	112	110	107	106	104
Diluted Earnings Per Share(USD)	9.71	10.09	10.25	11.09	12.40
Dividends Per Share(USD)	3.68	4.12	4.40	4.84	5.32

Forward Valuation

			Estimates		
	2022	2023	2024	2025	2026
Price/Sales	1.7	1.6	2.0	1.8	1.7
Price/Earnings	23.2	21.3	26.3	24.3	21.7
Price/Cash Flow	—	—	—	—	—
Dividend Yield %	1.6	1.9	1.6	1.8	2.0
Price/Book	12.4	11.0	13.1	11.7	10.3
EV/EBITDA	16.1	14.9	17.8	16.8	15.7

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Tractor Supply Co TSCO ★★ 6 May 2024 21:16, UTC

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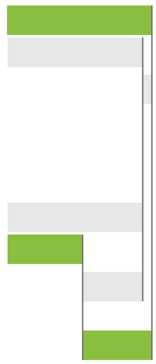
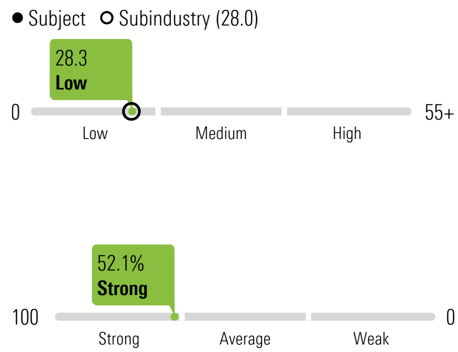
ESG Risk Rating Breakdown

Exposure	
Company Exposure[1]	28.3
– Manageable Risk	26.5
Unmanageable Risk[2]	**1.7**
Management	
Manageable Risk	26.5
– Managed Risk[3]	13.8
Management Gap[4]	**12.7**
Overall Unmanaged Risk	**14.4**





- 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 52.1% 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 May 01, 2024. Highest Controversy Level is as of Apr 08, 2024. Sustainalytics Subindustry: Specialty Retail. 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 01 May 2024

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

Company Name	Exposure			Management			ESG Risk Rating		
Tractor Supply Co	28.3 | Low	0	55+	52.1 | Strong	100	0	14.4 | Low	0	40+
Lowe's Companies Inc	26.6 | Low	0	55+	57.1 | Strong	100	0	12.6 | Low	0	40+
Dollar General Corp	34.0 | Low	0	55+	39.5 | Average	100	0	21.6 | Medium	0	40+
The Home Depot Inc	25.1 | Low	0	55+	51.3 | Strong	100	0	13.3 | Low	0	40+
Target Corp	34.3 | Low	0	55+	50.2 | Strong	100	0	18.4 | Low	0	40+

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Appendix
Historical Morningstar Rating

Tractor Supply Co TSCO 6 May 2024 21:16, UTC

Dec 2024	Nov 2024	Oct 2024	Sep 2024	Aug 2024	Jul 2024	Jun 2024	May 2024	Apr 2024	Mar 2024	Feb 2024	Jan 2024
—	—	—	—	—	—	—	★★	★★	★★	★★	★★★
Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
★★★	★★★	★★★★	★★★	★★★	★★★	★★★	★★★	★★	★★★	★★	★★
Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★	★★	★★	★★★	★★★	★★★	★★	★★★	★★	★	★★	★★
Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★	★	★	★	★	★	★	★	★	★	★	★★
Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★★	★★	★★	★★	★	★★	★★	★★	★★★	★★★★	★★★	★★★
Dec 2019	Nov 2019	Oct 2019	Sep 2019	Aug 2019	Jul 2019	Jun 2019	May 2019	Apr 2019	Mar 2019	Feb 2019	Jan 2019
★★★	★★★	★★★	★★★	★★★	★★	★★	★★★	★★	★★★	★★★	★★★

The Home Depot Inc HD 6 May 2024 21:16, UTC

Dec 2024	Nov 2024	Oct 2024	Sep 2024	Aug 2024	Jul 2024	Jun 2024	May 2024	Apr 2024	Mar 2024	Feb 2024	Jan 2024
—	—	—	—	—	—	—	★★	★★	★	★	★★
Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
★★	★★	★★★	★★	★★	★★	★★	★★	★★★	★★★	★★	★★
Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★	★★	★★★	★★★	★★	★★	★★★	★★	★★	★★	★★	★
Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★	★	★	★	★	★	★	★	★	★	★★	★★
Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★★	★★	★	★	★	★	★★	★★	★★	★★★	★★	★★
Dec 2019	Nov 2019	Oct 2019	Sep 2019	Aug 2019	Jul 2019	Jun 2019	May 2019	Apr 2019	Mar 2019	Feb 2019	Jan 2019
★★	★★	★	★★	★★	★★	★★	★★	★★	★★★	★★	★★★

Lowe's Companies Inc LOW 6 May 2024 21:16, UTC

Dec 2024	Nov 2024	Oct 2024	Sep 2024	Aug 2024	Jul 2024	Jun 2024	May 2024	Apr 2024	Mar 2024	Feb 2024	Jan 2024
—	—	—	—	—	—	—	★★	★★	★★	★★	★★★
Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
★★★	★★★	★★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★★	★★★	★★★
Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★★	★★★	★★★	★★★	★★★	★★★	★★★★	★★★	★★★	★★★	★★	★★
Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★	★	★★	★★	★★	★★	★★	★★	★★	★★	★★	★★
Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★★	★★★	★★	★★	★★	★★	★★	★★	★★★	★★★★	★★	★★
Dec 2019	Nov 2019	Oct 2019	Sep 2019	Aug 2019	Jul 2019	Jun 2019	May 2019	Apr 2019	Mar 2019	Feb 2019	Jan 2019
★★	★★	★★	★★	★★	★★★	★★★	★★★	★★	★★★	★★★	★★★

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Target Corp TGT 6 May 2024 21:16, UTC

Dec 2024 —	Nov 2024 —	Oct 2024 —	Sep 2024 —	Aug 2024 —	Jul 2024 —	Jun 2024 —	May 2024 ★★	Apr 2024 ★★	Mar 2024 ★★	Feb 2024 ★★	Jan 2024 ★★★
Dec 2023 ★★★	Nov 2023 ★★★	Oct 2023 ★★★★	Sep 2023 ★★★★	Aug 2023 ★★★	Jul 2023 ★★★★	Jun 2023 ★★★★	May 2023 ★★★★	Apr 2023 ★★★	Mar 2023 ★★★	Feb 2023 ★★★	Jan 2023 ★★★
Dec 2022 ★★★★	Nov 2022 ★★★	Oct 2022 ★★★	Sep 2022 ★★★	Aug 2022 ★★★	Jul 2022 ★★★	Jun 2022 ★★★★	May 2022 ★★★	Apr 2022 ★★	Mar 2022 ★★	Feb 2022 ★★	Jan 2022 ★★
Dec 2021 ★★	Nov 2021 ★	Oct 2021 ★	Sep 2021 ★	Aug 2021 ★	Jul 2021 ★	Jun 2021 ★	May 2021 ★	Apr 2021 ★	Mar 2021 ★	Feb 2021 ★	Jan 2021 ★
Dec 2020 ★	Nov 2020 ★	Oct 2020 ★	Sep 2020 ★	Aug 2020 ★	Jul 2020 ★★	Jun 2020 ★★	May 2020 ★★	Apr 2020 ★★	Mar 2020 ★★★	Feb 2020 ★★★	Jan 2020 ★★
Dec 2019 ★	Nov 2019 ★	Oct 2019 ★★	Sep 2019 ★★	Aug 2019 ★★	Jul 2019 ★★	Jun 2019 ★★	May 2019 ★★★	Apr 2019 ★★	Mar 2019 ★★	Feb 2019 ★★★	Jan 2019 ★★★

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Overview

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

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

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

1. Economic Moat

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

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

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

2. Estimated Fair Value

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

Our model is divided into three distinct stages:

Stage I: Explicit Forecast

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

Stage II: Fade

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

Stage III: Perpetuity

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

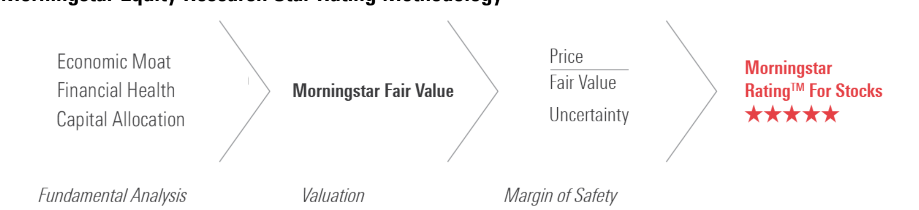
Because a dollar earned today is worth more than a dollar earned tomorrow, we discount our projections of cash flows in stages I, II, and III to arrive at a total present value of expected future cash flows. Because we are modeling free cash flow to the firm—representing cash available to provide a return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

3. Uncertainty Around That Fair Value Estimate

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

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

Morningstar Equity Research Star Rating Methodology



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

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

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

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

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

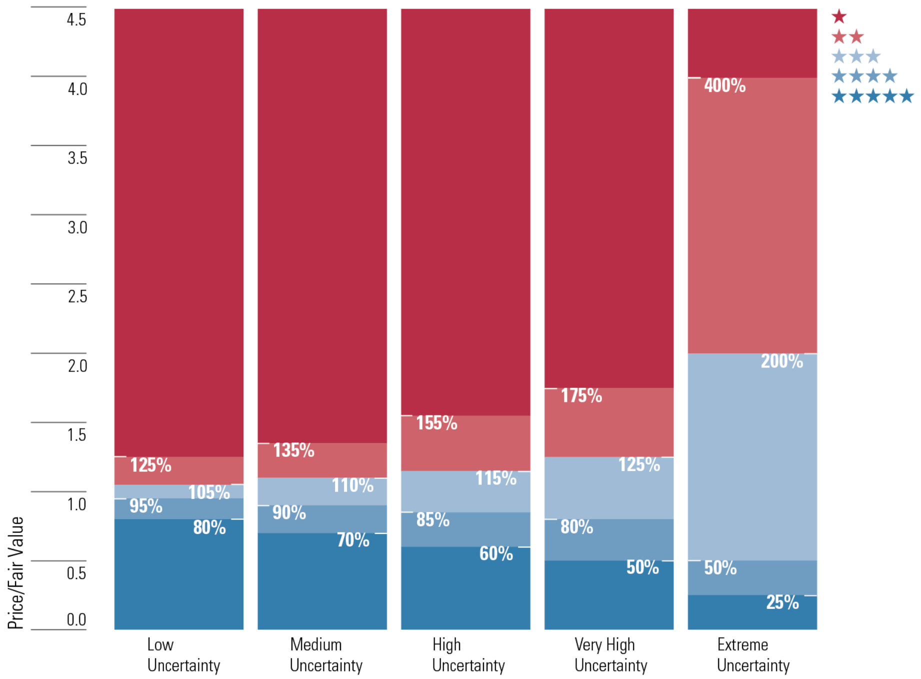
4. Market Price

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

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

Morningstar Star Rating for Stocks

Morningstar Equity Research Star Rating Methodology



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

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

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

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

The Morningstar Star Ratings for stocks are defined below:

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

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

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

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

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

Other Definitions

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

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

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

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

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

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

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

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

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

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

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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