

2024 Moat Review: We Found More Wide Moats

A robust review year resulted in more wide moat ratings, but also more no-moat ratings. Industrials and tech led the upgrades.

Morningstar Equity Research

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Contents

- 2 Key Takeaways
- 4 Industrials, Consumer Cyclical, and Technology Companies Garnered the Most Upgrades in 2024
- 20 Financials, Consumer Cyclical, and Communication Services Had the Most Downgrades in 2024
- 32 Appendix

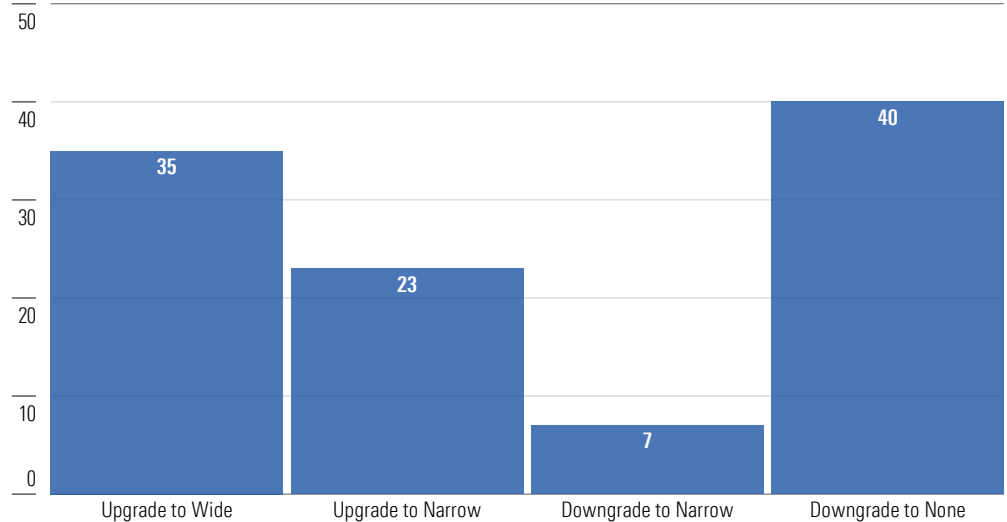
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Executive Summary

During 2024, our review of 634 economic moat ratings resulted in 105 changes: 58 upgrades and 47 downgrades. Many of these were part of our requirement that each moat rating be reviewed at least every five years. Upgrades were concentrated in consumer cyclical, industrials, and technology companies. Downgrades were mainly in communication services, financial, and consumer cyclical companies. Here we identify the key changes, trends, and takeaways we observed during these reviews that spurred the rating changes. We also highlight the undervalued companies whose moat ratings we upgraded.

Exhibit 1 In 2024, We Changed 105 Moat Ratings, Upgrading 58 and Downgrading 47



Source: Morningstar.

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Key Takeaways

- ▶ Thanks to strong intangible assets and switching costs, we upgraded eight industrials companies to wide moats and four to narrow moats. These companies' products range from fighter jets to sealants, but all are mission-critical and specialized, making substitution very difficult.
- ▶ We upgraded moats for 14 technology companies, including 12 to wide. Several of those upgrades were in the semiconductor industry, where greater complexity requires specialized knowledge, an intangible asset that creates higher barriers to entry. Once included in the process, these companies become nearly impossible to dislodge in the near term, given the powerful switching costs.
- ▶ In the consumer cyclical sector, we upgraded eight companies to narrow and five to wide. The upgrades to wide included hotel operators, which benefit from size and scale, loyalty programs, and strong brands. Auto-parts stores AutoZone and O'Reilly were also upgraded on their size, brands, and differentiated models.
- ▶ Financial-services firms received the most downgrades during 2024 with 12, led by five downgrades for asset managers on weakening intangible assets. This is evident in recent years' lower retention rates, weaker growth, and fee compression. We also downgraded Berkshire Hathaway to narrow from wide.
- ▶ The media sector represented many of the 10 communication services downgrades. As streaming takes hold, these companies will find it difficult to replace their lucrative linear TV businesses even if they successfully transition.
- ▶ Weakening brands, increased competition, and failure to adapt were reasons for the eight consumer cyclical downgrades that spanned automakers, retailers, and apparel firms.

Undervalued Wide Moat Upgrades

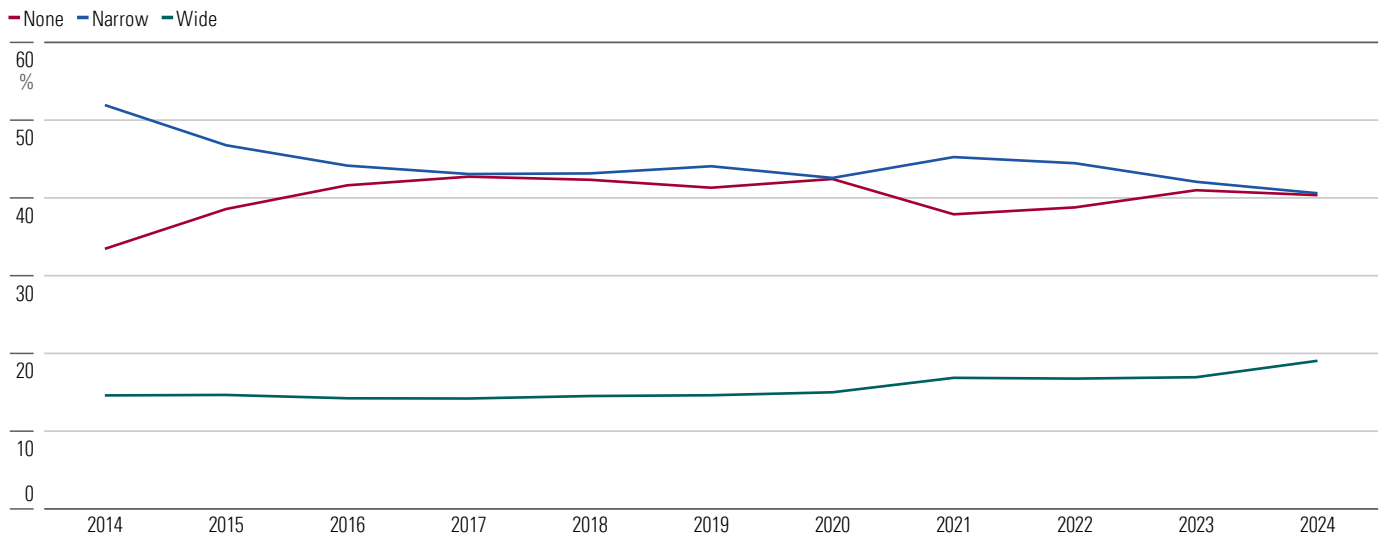
Name/Ticker	Economic Moat	Currency	Fair Value Estimate	Current Price	Uncertainty Rating	Morningstar Rating	Market Cap (Bil)
NXP Semiconductors NXPI	Wide	USD	300	205.75	Medium	★★★★★	52.2
Philips PHIA	Wide	EUR	35	23.46	High	★★★★★	21.7
Tokyo Electron 8035	Wide	JPY	30,000	22,670.00	High	★★★★★	10,210.5
Murata Manufacturing 6981	Wide	JPY	3,600	2,510.00	Medium	★★★★★	4,657.8
Synopsys SNPS	Wide	USD	550	449.90	High	★★★★★	69.6
Universal Music Group UMG	Wide	EUR	31	25.51	Medium	★★★★★	46.7
Nordson NDSN	Wide	USD	246	206.55	Medium	★★★★★	11.8
Idex IEX	Wide	USD	217	184.74	Medium	★★★★★	14.0
Sony 6758	Wide	JPY	4,200	3,852.00	Medium	★★★★★	23,284.3

Data as of March 27, 2025.

Nearly 20% of Our Coverage Now Has a Wide Moat

Changes during the year continued recent trends, with fewer narrow moat ratings and more wide and no-moat ratings. Wide moats constitute nearly 20% of our coverage, the highest level ever.

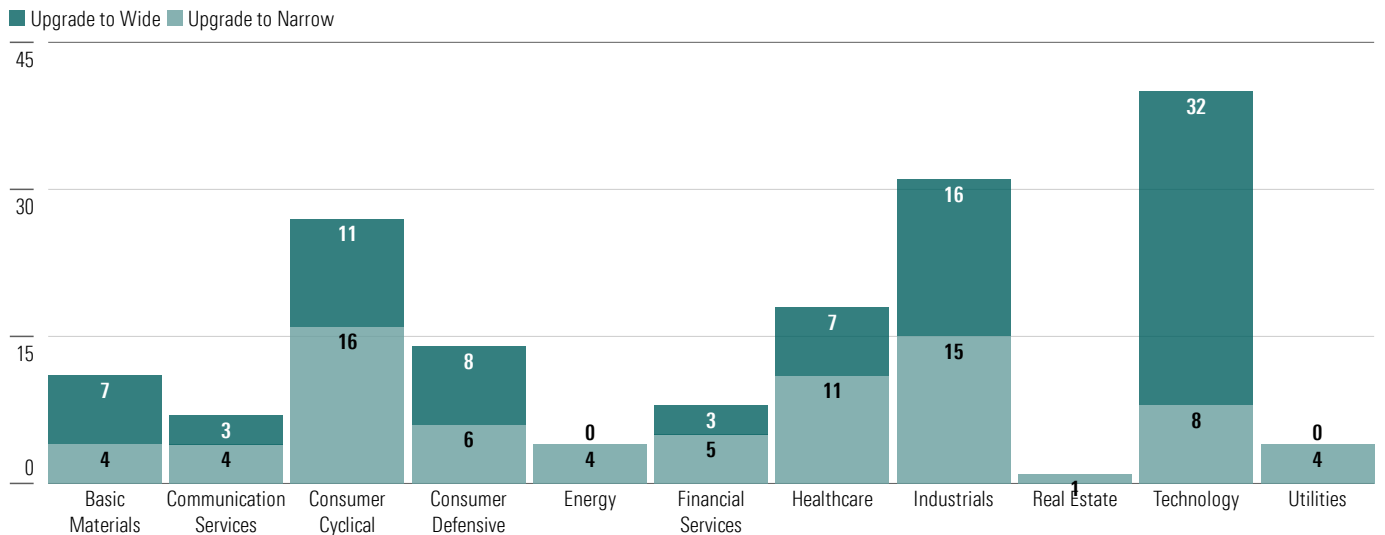
Exhibit 2 Review Process Extended Trend of Our Coverage, Increasing Relative Amount of Wide Moats



Source: Morningstar, PitchBook. Data as of Feb. 13, 2025.

During the last five years, technology, industrials, and consumer cyclical firms were most frequently upgraded to wide moat. The 2024 upgrades in these three sectors are discussed in this report.

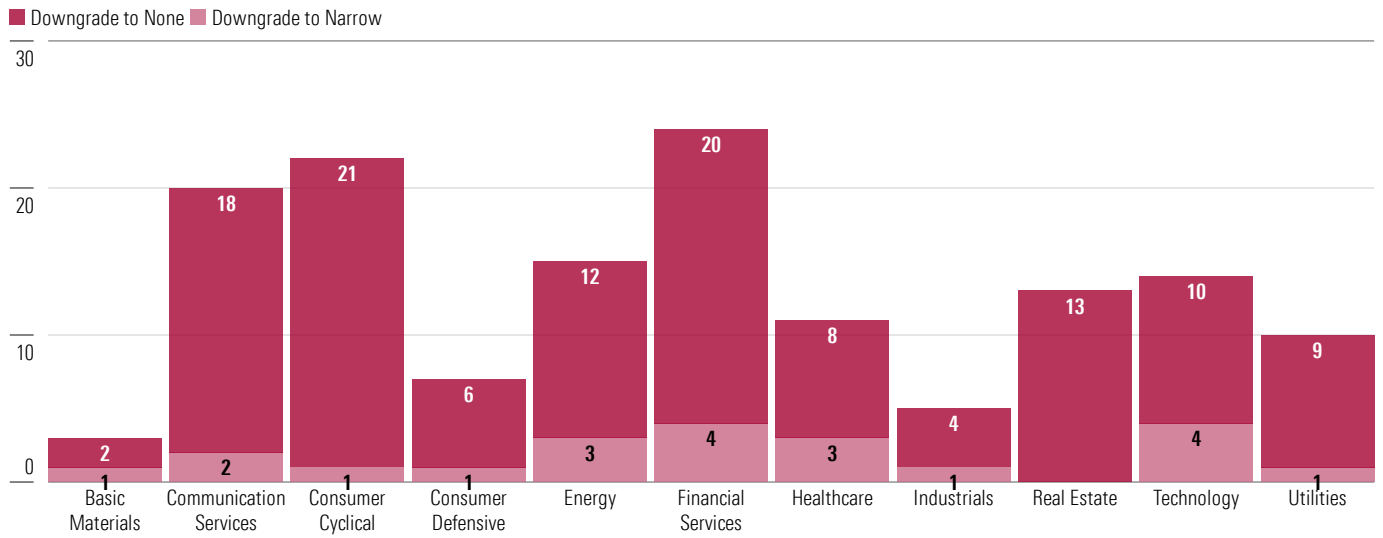
Exhibit 3 In Last Five Years, Technology, Industrials, and Consumer Cyclical Firms Realized the Most Moat Upgrades



Source: Morningstar, PitchBook. Data as of March 27, 2025.

During the last five years, financial services, consumer cyclical, and communication services firms were most frequently downgraded to narrow or no moat. The 2024 downgrades in these three sectors are also discussed in this report.

Exhibit 4 In Last Five Years, Financial Services, Consumer Cyclical, and Communication Services Firms Realized the Most Moat Downgrades

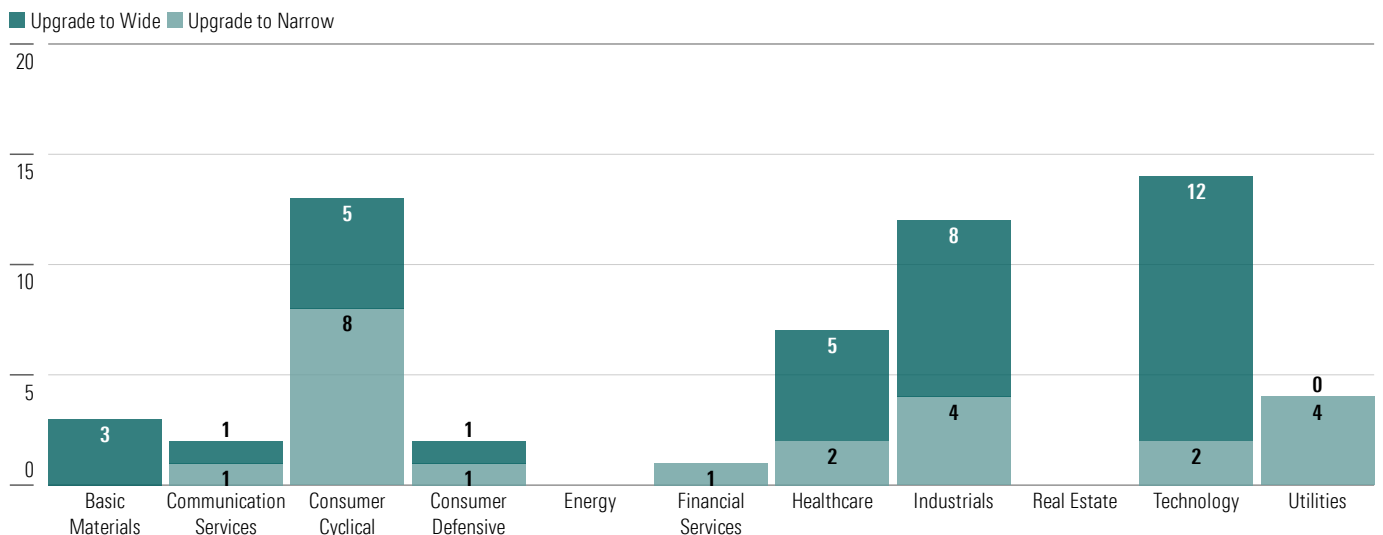


Source: Morningstar, PitchBook. Data as of March 27, 2025.

Industrials, Consumer Cyclical, and Technology Companies Garnered the Most Upgrades in 2024

During 2024, we upgraded 58 ratings. The 35 upgrades to wide were concentrated in industrials and technology. Consumer cyclical upgrades were primarily to narrow from none.

Exhibit 5 In 2024, Industrials, Consumer Cyclical, and Technology Firms Realized the Most Moat Upgrades



Source: Morningstar, PitchBook. Data as of March 27, 2025.

Mission-Critical Industrials Suppliers Upgraded on Strength of Switching Costs, Intangible Assets

[Defense Industry Landscape](#), January 2025

[Wide-Moat Nordson Set to Capitalize on Favorable Secular Trends](#), November 2024

[Electrifying Growth](#), November 2024

[Market Is Missing Changes Afoot at Veolia](#), June 2024

[GE Aerospace: Turbines and Blades](#), September 2024

In 2024, we upgraded eight industrials firms' moat ratings to wide, keeping with our evolving view of the strength of competitive advantages in the sector. During the last five years, we've upgraded 16 industrials to wide moat and another 15 to narrow. For several of these, the upgrades are understandable, given the dollar amounts involved and the difficulty in manufacturing the products. This is the case with defense firms like Dassault Aviation or jet engine maker GE Aerospace. However, in other instances, newly minted wide-moat companies produce a portfolio of "boring" products that, while relatively inexpensive, are mission-critical.

Exhibit 6 Industrials Moat Upgrades in 2024

Company	Ticker	Moat Change	Sector	Network Effect	Efficient Scale	Intangible Assets	Cost Advantage	Customer Switching Costs
Smiths Group PLC	LON:SMIN	Narrow to Wide	Industrials			✓		✓
AMETEK Inc	NYS:AME	Narrow to Wide	Industrials			✓		✓
Illinois Tool Works Inc	NYS:ITW	Narrow to Wide	Industrials			✓		✓
IDEX Corp	NYS:IEX	Narrow to Wide	Industrials			✓		✓
Nordson Corp	NAS:NDSN	Narrow to Wide	Industrials			✓		✓
Eaton Corp PLC	NYS:ETN	Narrow to Wide	Industrials			✓		✓
GE Aerospace	NYS:GE	Narrow to Wide	Industrials			✓		✓
Dassault Aviation SA	PAR:AM	Narrow to Wide	Industrials			✓		✓
Reliance Worldwide Corp Ltd	ASX:RWC	None to Narrow	Industrials			✓		
SGH Ltd	ASX:SGH	None to Narrow	Industrials		✓		✓	
Veolia Environnement SA	PAR:VIE	None to Narrow	Industrials		✓	✓		
ALS Ltd	ASX:ALQ	None to Narrow	Industrials				✓	

Source: Morningstar, PitchBook. Data as of March 27, 2025.

We find that although the wide-moat companies' products vary to a great degree with regard to purpose and end markets, they typically share these common denominators:

- ▶ Highly engineered
- ▶ Specified design to meet customer or regulatory needs
- ▶ Significant degree or high level of customization
- ▶ Low-cost relative to a more costly or extensive process or product
- ▶ High cost of failure
- ▶ Improve operating efficiency
- ▶ Evolving technology, not revolutionary
- ▶ Low disruption risk
- ▶ Difficult to replicate

- ▶ Niche market
- ▶ Few competitors
- ▶ High market share

These product characteristics mean that wide-moat industrials companies often benefit from a combination of intangible assets and switching costs, reinforcing one another and widening the moat relative to companies that might hold only one of these traits. Intangible assets such as know-how or brand reputation are required to secure the customer's business in the first place. Switching costs, such as integration into another product or process, ensure that the initial sale pays dividends through long-term maintenance contracts or regular replacement cycles.

The following intangible assets are instrumental in securing customers:

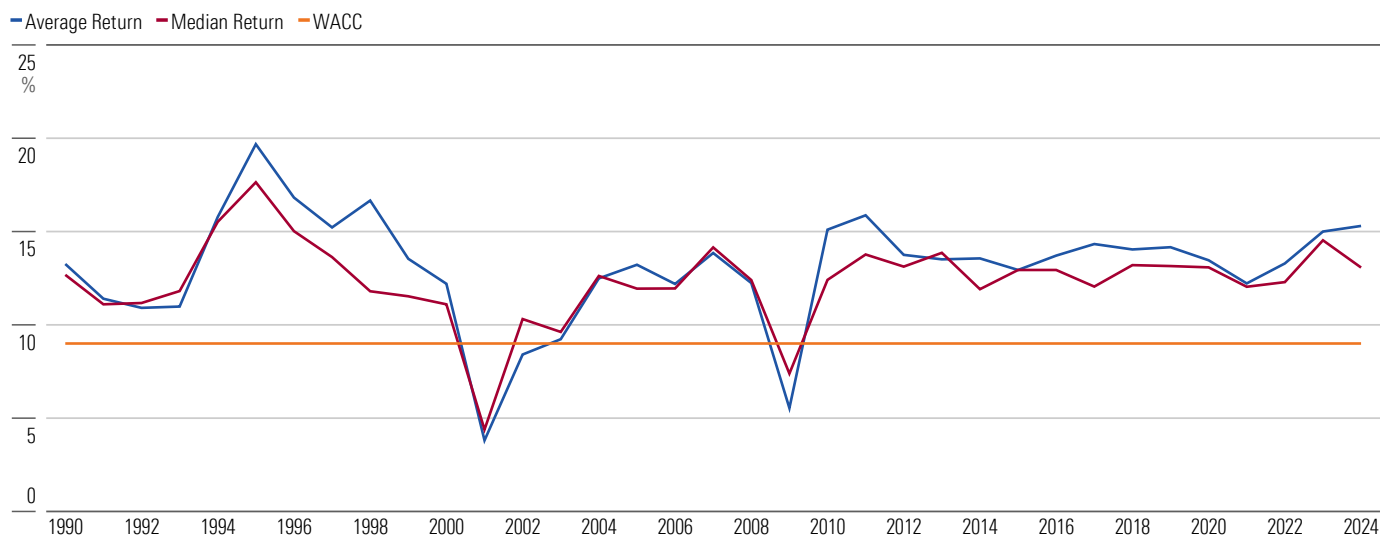
- ▶ Brand that conveys performance
- ▶ Reputation for reliability
- ▶ Patents and intellectual property
- ▶ Design know-how
- ▶ Distributor relationships
- ▶ Customer loyalty
- ▶ Research and development that drives product improvement or innovation in new adjacent product lines

The following switching costs extend the benefit of the initial sale and support a razor-and-blade model or ensure future repeat sales:

- ▶ Integration into a customer's products and processes
- ▶ High cost of substitution (time and testing)
- ▶ High cost of failure
- ▶ High cost of downtime
- ▶ High cost of system or process modification
- ▶ Risk aversion
- ▶ Maintenance/upgrade cycles
- ▶ Steady demand for servicing and replacement parts due to wear and tear
- ▶ Long-term contracts
- ▶ Service agreements
- ▶ Large installed base
- ▶ Inertia to replace low-cost parts or find alternative suppliers

Moats are about delivering durable—not necessarily high—returns on capital. For industrials, returns on capital are unlikely to exceed 20%. Still, the companies elevated to wide moats in 2024 (excluding GE Aerospace, a spinoff) have consistently generated excess returns on capital in the midteens. Although it fell sharply during recessions (2001 and 2009), cumulative economic profit remained positive throughout the cycle. Moat ratings are forward-looking and rely on our forecasts. Still, this long-term record increases our confidence that returns will persist over 20 years, supported by strong, structural competitive advantages.

Exhibit 7 Newly Minted Wide-Moat Industrials Have a Long Record of Excess Returns



Source: Morningstar, PitchBook. Average and median returns of industrials companies upgraded to wide moat during 2024. Data excludes GE Aerospace as historical records are unavailable.

Although most of these companies had a long record of returns, they didn't always instill the necessary confidence that those returns would persist. In the case of these upgrades, either the outlook on the durability of their advantages changed or their business was transformed in the recent past. We now recognize strong enough structural competitive advantages in each circumstance to rate them as wide moats.

Exhibit 8 Wide Moat Upgrades Resulted From a Change in Our Outlook or a Business Transformation

Company	Ticker	Products	What Changed?	Upgrade Prompt
Ametek	AME	Electronic instruments, monitoring systems, precision components	Outlook	Greater durability of intangible assets, switching costs, capital allocation
Dassault Aviation	AM	Fighter jets	Business transformation	Shift from competitive business jets to specialized fighter jets
Eaton	ETN	Power management solutions, electrical components, industrial systems	Business transformation	Improving returns from mix shift and operating efficiencies
GE Aerospace	GE	Aircraft engines	Business transformation	Divestitures and breakup of conglomerate
Ilex	IEX	Pumps, flow meters, valves, fluidic systems	Outlook	Reassessment resulted in view of stronger switching costs
Illinois Tool Works	ITW	Commercial kitchen appliances, inspection and welding equipment	Outlook	Recognition of brand equity, technical acumen, and switching costs
Nordson	NDSN	Pumps, valves, dispensers, applicators, filters, pelletizers	Outlook	Reassessment resulted in view of stronger switching costs
Smiths Group	SMIN	Mechanical seals	Business transformation	Wide-moat seals segment has grown to majority of revenue

Source: Morningstar.

Although the market has often already incorporated the stronger moats through higher valuations, leaving many industrials overvalued, some companies remain undervalued, such as peers Ilex and Nordson and recently upgraded narrow moats RWC Global and Veolia.

Exhibit 9 Nordson and IDEX Stand Out as Undervalued Companies That Recently Earned Wide Moat Ratings

Company	Moat	FVE	Current Price	Price/Fair Value	Star rating
RWC Global	Narrow	5.70	4.52	0.79	★★★★
Nordson	Wide	246.00	206.55	0.84	★★★★
Veolia Environnement	Narrow	37.50	31.79	0.85	★★★★
IDEX (Industrial Supplies and Parts)	Wide	217.00	184.74	0.85	★★★★
Smiths Group	Wide	2,030.00	1,974.00	0.97	★★★
Eaton	Wide	288.00	285.52	0.99	★★★
AMETEK	Wide	168.00	176.90	1.05	★★★
GE Aerospace	Wide	195.00	207.37	1.06	★★★
Illinois Tool Works	Wide	215.00	255.89	1.19	★★
SGH	Narrow	37.00	51.15	1.38	★
Dassault Aviation	Wide	227.00	315.40	1.39	★
ALS	Narrow	10.50	15.82	1.51	★

Source: Morningstar, PitchBook. Data as of March 27, 2025.

Although Diverse, Upgraded Consumer Cyclical Companies Share Common Traits

Three industries — hotel operators, auto-parts stores, and cruise lines — constituted most of the consumer cyclical upgrades in 2024. We upgraded the cruise lines to narrow. Here we focus on what's changed for hotel operators and auto-parts stores to upgrade them to wide.

Exhibit 10 Consumer Cyclical Moat Upgrades in 2024

Company	Ticker	Moat Change	Sector	Network Effect	Efficient Scale	Intangible Assets	Cost Advantage	Customer Switching Costs
AutoZone Inc	NYS:AZO	Narrow to Wide	Consumer Cyclical			✓	✓	
Hilton Worldwide Holdings Inc	NYS:HLT	Narrow to Wide	Consumer Cyclical			✓		✓
InterContinental Hotels Group PLC	NYS:IHG	Narrow to Wide	Consumer Cyclical			✓		✓
Marriott International Inc	NAS:MAR	Narrow to Wide	Consumer Cyclical			✓		✓
O'Reilly Automotive Inc	NAS:ORLY	Narrow to Wide	Consumer Cyclical			✓	✓	
Carnival Corp	NYS:CCL	None to Narrow	Consumer Cyclical		✓	✓	✓	
Dick's Sporting Goods Inc	NYS:DKS	None to Narrow	Consumer Cyclical			✓		
DraftKings Inc	NAS:DKNG	None to Narrow	Consumer Cyclical			✓		
Gildan Activewear Inc	NYS:GIL	None to Narrow	Consumer Cyclical				✓	
Norwegian Cruise Line Holdings Ltd	NYS:NCLH	None to Narrow	Consumer Cyclical		✓	✓	✓	
Royal Caribbean Group	NYS:RCL	None to Narrow	Consumer Cyclical		✓	✓	✓	
Sea Ltd	NYS:SE	None to Narrow	Consumer Cyclical	✓				
Super Retail Group Ltd	ASX:SUL	None to Narrow	Consumer Cyclical				✓	

Source: Morningstar. Data as of March 27, 2025.

Larger Hotel Operators' Competitive Position Is Strengthening Over Smaller Peers

Hotel Operators Industry Landscape, November 2024

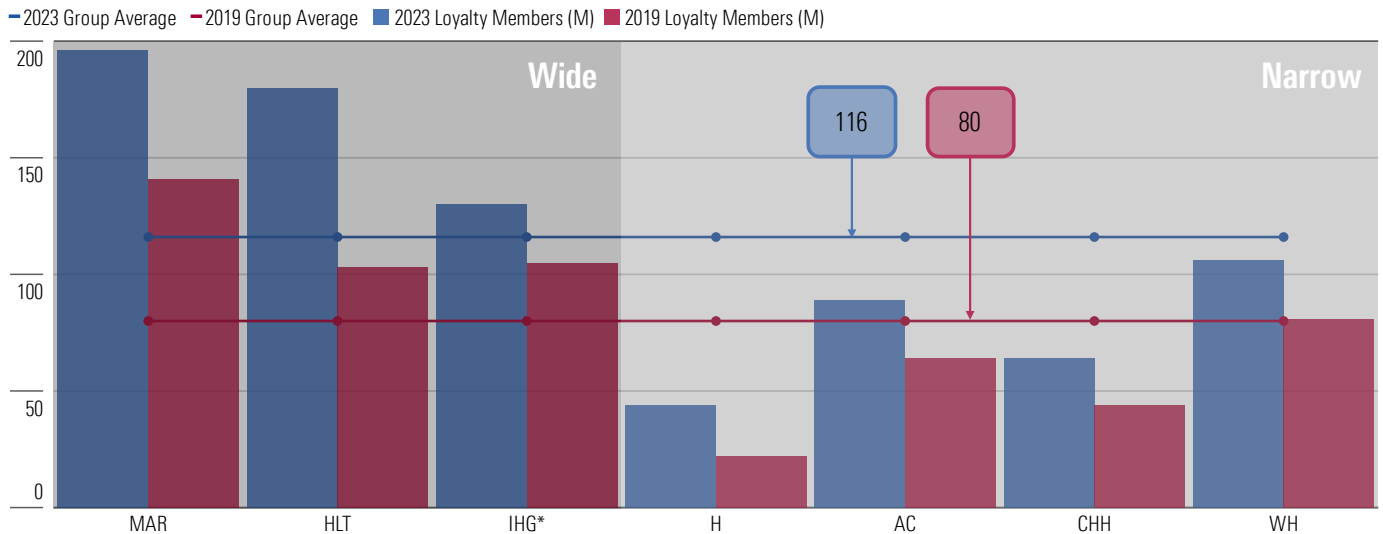
We reviewed the moat ratings for seven hotel operators in 2024 and upgraded three to wide: Marriott International, Hilton Worldwide, and InterContinental Hotels Group. The remainder retained their narrow moat ratings. These three hotel firms benefit from intangible assets and switching costs that we view as having strengthened relative to other operators and deserve a wide moat.

Intangible Assets

Brand strength. These three major hotel operators demonstrate varying degrees of brand strength in the market. Marriott stands out with industry-leading brand intangible advantages, offering the most comprehensive hotel portfolio globally. Hilton follows with significant brand intangible advantages supported by its substantial global presence. IHG shows evidence of an expanding brand intangible asset with continued growth potential, though not yet at the level of its two larger competitors.

Portfolio scale. Each operator maintains impressive portfolio scale, albeit at different levels. Marriott leads with the largest footprint of 1.7 million rooms spread across more than 30 brands as of 2024. Hilton's portfolio encompasses over 8,400 hotels representing 20 brands. IHG operates a substantial network of more than 6,300 hotels across approximately 20 brands as reported in 2023.

Exhibit 11 Enhanced Benefits Aid Expanding Loyalty Membership



Source: Morningstar, company reports. *IHG says 2019 was 100 million; we estimate 105 million.

Loyalty programs. Loyalty programs are a significant intangible asset for all operators. Marriott boasts the industry's largest program, with 228 million members, generating over 60% of the company's room nights. Hilton's program, with 211 million members, drives approximately two thirds of total room nights. IHG operates the third-largest program, with 145 million members, accounting for 55% of room nights.

Global reach and market share. Market positioning varies by geography among the operators. Marriott holds either the first or second position across all major geographies, including market leadership in North America. Hilton claims top revenue share positions across major international geographies while maintaining the second position in the US market. IHG holds third place in Western Europe and in the United States and is fifth in Greater China.

Exhibit 12 Wide-Moat Marriott, Hilton, and InterContinental Offer Travelers the Broadest Combination of Hotels Across Regions and Price Points

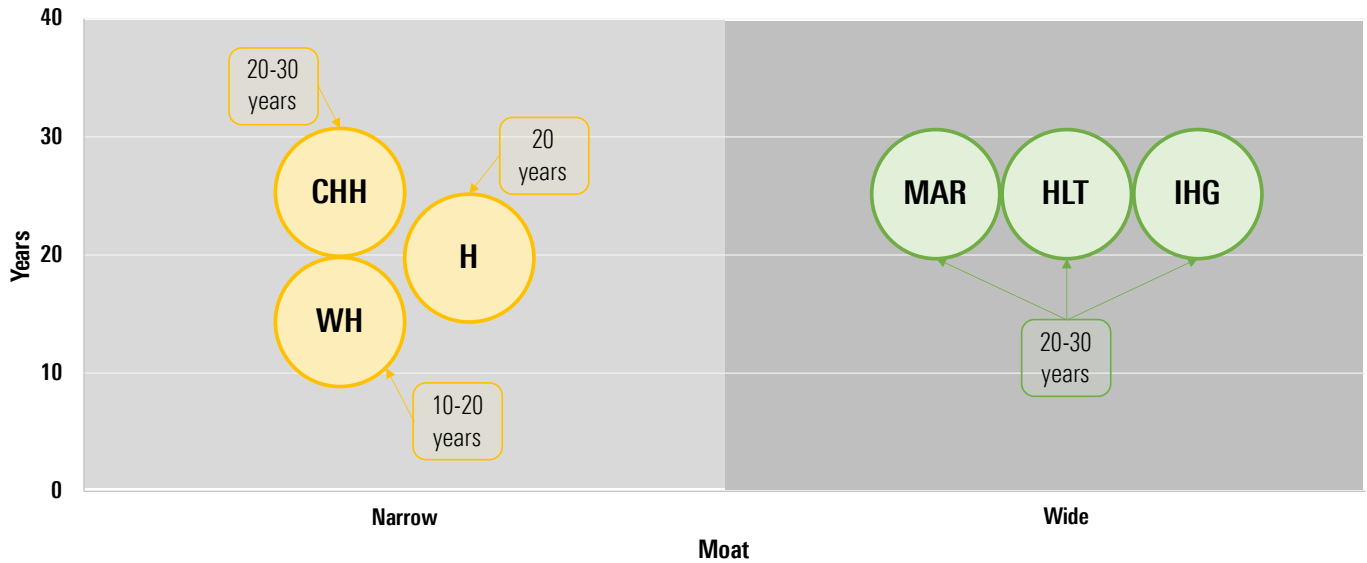


Source: Company filings. Data from 2023. AC is predominantly an international operator and is listed on Euronext Paris. Thus, AC’s metric represents its Americas hotel exposure versus listed operators MAR, HLT, IHG, WH, CHH, and H percentages equating to their non-US hotel portfolios.

Switching Costs

Contract duration. All three operators secure long-term commitments that create substantial switching costs. Marriott’s contracts typically span 20-30 years with renewal options extending 10 or more years. Hilton follows a similar pattern with 20- to 30-year agreements offering renewal options of 5 or more years. IHG maintains competitive contract durations of 20-30 years with renewal options ranging from 5 to 10 years.

Exhibit 13 Across Our Coverage, Hoteliers Secure 10- to 30-Year Contracts With Third Parties, Led by Wide-Moat Firms



Source: Morningstar, company filings. Data as of October 2024.

Termination penalties. The operators employ nearly identical termination penalties that discourage switching. Property owners face significant renovation and rebranding expenditures to meet new brand specifications, business disruption and revenue loss during transitions, and substantial cessation fees typically amounting to two to three years of monthly management fees plus the previous year's incentive fee.

Retention metrics. Strong retention metrics validate the effectiveness of these switching costs. Marriott and Hilton maintain impressively low annual attrition rates of just 1%-2% among their managed and franchised properties. IHG experiences a similarly low 2% annual attrition rate across its portfolio, confirming the strength of its switching cost advantages.

Two Auto-Parts Stores Clearly Stand Above the Rest

O'Reilly Automotive and AutoZone were upgraded to wide from narrow. Intangible assets and a cost advantage underpin the upgrade for both companies.

Intangible Assets

Brand recognition and reputation. Strong brands coupled with quality service levels and a vast array of products result in a competitive edge. Both firms' consistent comparable sales growth and historically steady gross margins are indicative of their strong value proposition and service levels, reinforcing their brand-driven intangible asset.

Strong customer service. These companies differentiate themselves through quality customer service throughout the vehicle diagnosis and purchasing process for non-expert do-it-yourself customers, speed

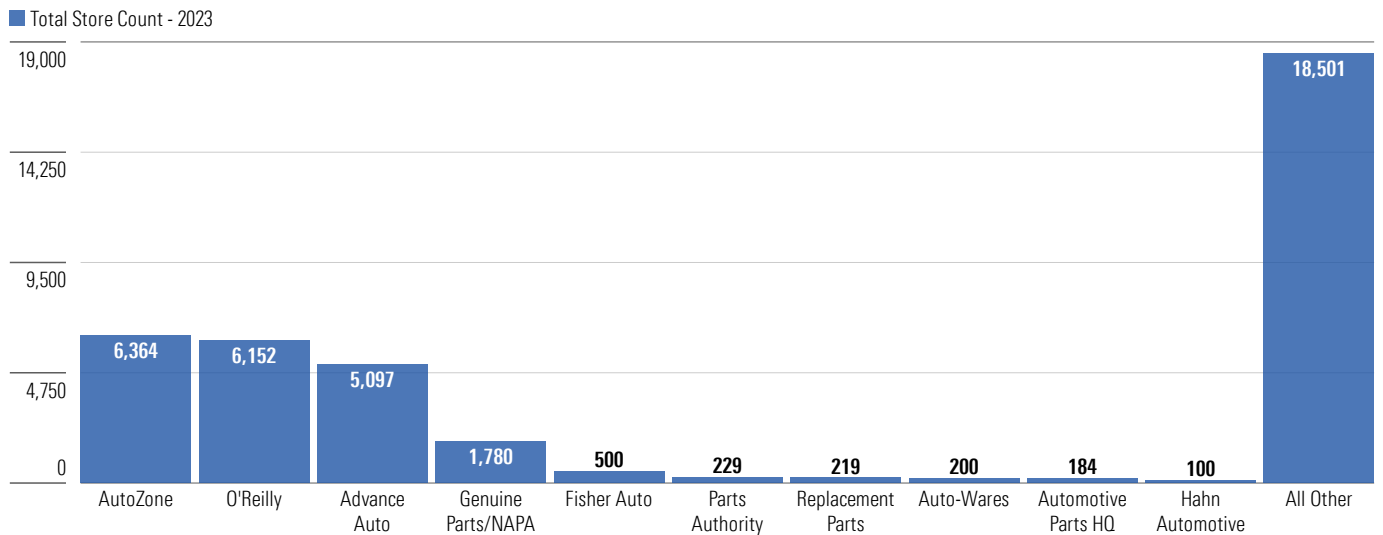
of service, and parts availability for the professional end market. This superior level of service is difficult to replicate without localized distribution capacity. The value proposition is rooted in convenience, staff expertise, and service levels, particularly for time-sensitive failure and maintenance products. A consistent focus on and reputation for strong customer service builds brand loyalty and justifies pricing power in a fragmented market.

Hub-and-spoke distribution networks. While having tangible components, these networks significantly enhance brand reputation for product availability and reliable service. They allow for quick delivery of items from hub stores to satellite stores, leading to more reliable in-stock levels than smaller auto-parts retailers and diversified discounters. The difficulty that competitors have replicating these networks strengthens the intangible value associated with their brands.

Cost Advantage

Purchasing scale and volume discounts. Purchasing scale relative to smaller competitors yields volume discounts from a network of suppliers. As leading players in a consolidating industry, both firms can command better supplier pricing. The top five auto-parts retail chains, including AutoZone and O'Reilly, operated about half of the industry's stores in 2023, highlighting their significant scale.

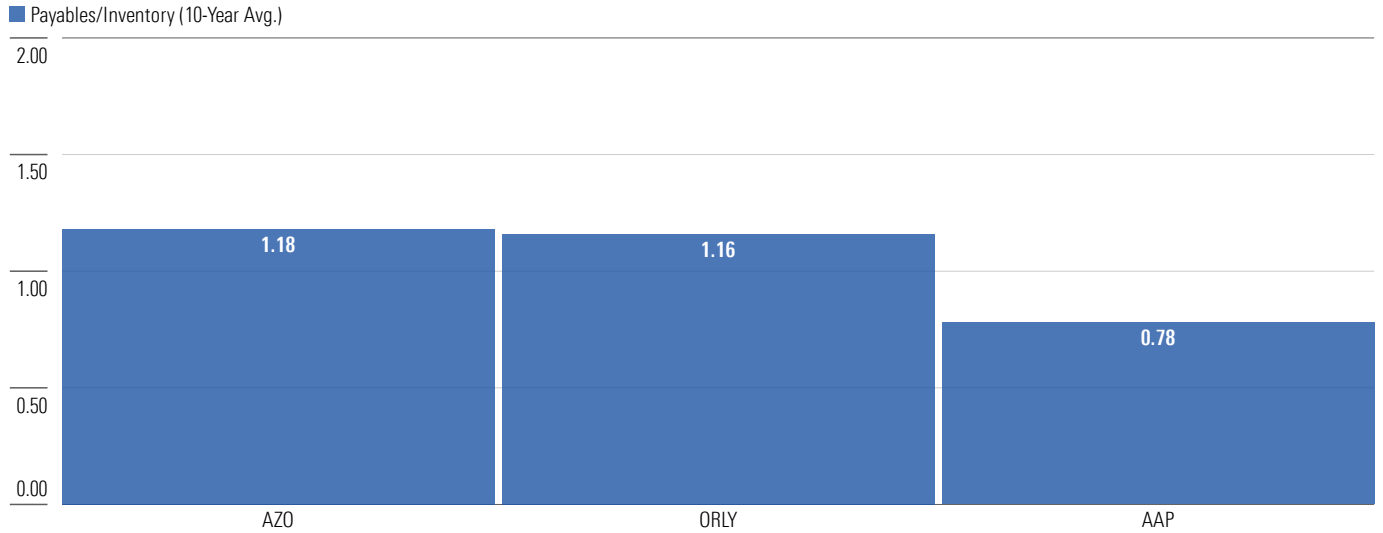
Exhibit 14 Wide-Moat Firms Hold Scale a Scale Advantage in a Fragmented Industry



Source: Morningstar.

Favorable payable terms. Leveraging size and scale to negotiate favorable payable terms with product suppliers drives a negative cash conversion cycle and negative working capital balance while stocking a vast assortment of slow-moving inventory and limiting capital outlays. This is viewed as an intangible asset and a vital component of product availability and is an advantage that smaller independent stores likely do not enjoy to the same degree.

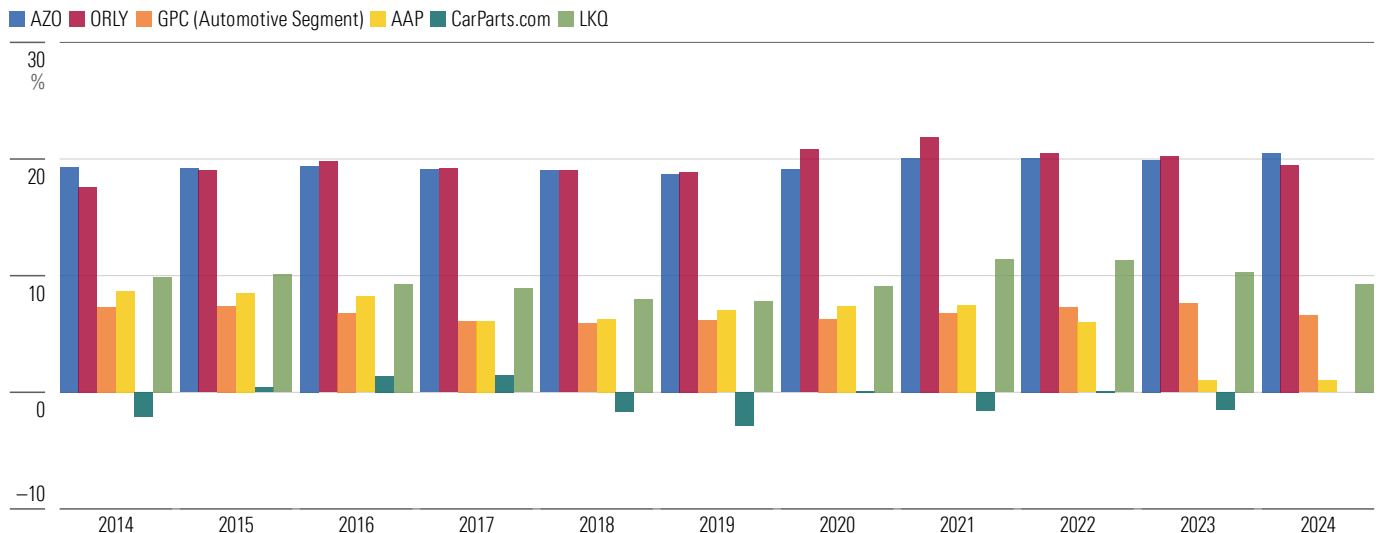
Exhibit 15 Scale Also Translates Into Favorable Payable Terms



Source: Morningstar, company reports. Data is trailing 10-year average.

Efficient hub-and-spoke distribution network. O'Reilly and AutoZone each boast an impressive hub-and-spoke distribution network designed to provide the localized store base with ample aftermarket product availability. This network, constituting local stores, hub stores, and regional distribution centers, allows for superior product availability over smaller peers. While not solely a cost advantage, the efficiency of this network contributes to competitive pricing and effective inventory management. The difficulty for smaller competitors and online retailers to replicate this network creates a barrier to entry and reinforces both companies' competitive position.

Exhibit 16 AutoZone's and O'Reilly's Competitive Advantages Result in Far Superior Operating Margins, Demonstrating Their Wide Moats



Source: Company reports.

In contrast, Advance Auto Parts delivers much lower margins as it lacks similar competitive advantages. This was behind our decision to downgrade its moat rating to none from narrow in 2024.

The growing adoption of electric vehicles is the greatest risk for auto-parts companies like O'Reilly and AutoZone. The primary concern is that EVs require fewer parts than vehicles with internal combustion engines. This fundamental difference could lead to dwindling demand for traditional aftermarket auto parts over time as EVs become more prevalent in the vehicle fleet. There's also a risk that original equipment manufacturers and dealerships could expand their presence in and share of the EV aftermarket, which would come at the expense of traditional aftermarket retailers and smaller repair shops.

However, the impact will be gradual, making EV adoption a long-term risk. Forecasts indicate that EVs will likely constitute around 40% of new-vehicle sales in the United States by 2030. However, due to the typical vehicle scrappage rate in the US (around 4%-5% annually), the transition of the entire US vehicle fleet from internal combustion engines to EVs is expected to take a considerable amount of time, estimated at 20-25 years. This assumes that all new-vehicle sales are EVs, which remains far off, meaning a much longer transition. As a result, there will still be a plentiful number of internal combustion engine vehicles in operation throughout the 2030s and early 2040s, which should continue to support demand in the aftermarket auto-parts industry even with increasing EV adoption. These companies have time to adapt to the changing landscape.

Exhibit 17 Upgraded Wide-Moat Firms Are Fairly Valued, but Several Upgraded Narrow-Moat Consumer Cyclical Are Undervalued

Company	Moat	FVE	Current Price	Price/Fair Value	Star rating
Norwegian Cruise Line Holdings	Narrow	31.50	20.22	0.64	★★★★
Carnival Corporation	Narrow	31.00	20.93	0.68	★★★★
DraftKings	Narrow	53.00	37.68	0.71	★★★★
Sea	Narrow	153.00	129.27	0.84	★★★★
Gildan Activewear	Narrow	50.00	44.19	0.88	★★★
Marriott International	Wide	260.00	246.72	0.95	★★★
InterContinental Hotels Group	Wide	115.00	111.18	0.97	★★★
Hilton Worldwide Holdings	Wide	225.00	234.86	1.04	★★★
Royal Caribbean Cruises	Narrow	185.00	219.86	1.19	★★
Super Retail Group	Narrow	11.00	13.22	1.20	★★
AutoZone (Distributors/Wholesale)	Wide	2,830.00	3,681.68	1.30	★★
Dick's Sporting Goods	Narrow	155.00	206.89	1.33	★★
O'Reilly Automotive Stores	Wide	920.00	1,380.98	1.50	★

Source: Morningstar, PitchBook. Data as of March 27, 2025.

Greater Complexity Is Erecting Higher Barriers to Entry for Many Technology Companies

In 2024, we upgraded 12 technology firms' moat ratings to wide in recognition of the sector's strengthening competitive advantages and ever-increasing importance. During the last five years, we've upgraded 32 technology companies' moat ratings to wide and another eight to narrow, the most upgrades of any sector.

Exhibit 18 Technology Moat Upgrades in 2024

Company	Ticker	Moat Change	Sector	Network Effect	Efficient Scale	Intangible Assets	Cost Advantage	Customer Switching Costs
Sony Group Corp	TKS:6758	None to Wide	Technology			✓		✓
Cadence Design Systems Inc	NAS:CDNS	Narrow to Wide	Technology			✓		✓
Tokyo Electron Ltd	TKS:8035	Narrow to Wide	Technology			✓	✓	✓
Synopsys Inc	NAS:SNPS	Narrow to Wide	Technology			✓		✓
Murata Manufacturing Co Ltd	TKS:6981	Narrow to Wide	Technology			✓	✓	
NXP Semiconductors NV	NAS:NXPI	Narrow to Wide	Technology			✓		✓
The Descartes Systems Group Inc	NAS:DSGX	Narrow to Wide	Technology	✓				✓
Manhattan Associates	NAS:MANH	Narrow to Wide	Technology			✓		✓
Shopify Inc	NYS:SHOP	Narrow to Wide	Technology					✓
Motorola Solutions Inc	NYS:MSI	Narrow to Wide	Technology			✓		✓
Wolters Kluwer NV	AMS:WKL	Narrow to Wide	Technology			✓	✓	✓
RELX PLC	LON:REL	Narrow to Wide	Technology			✓	✓	✓
TDK Corp	TKS:6762	None to Narrow	Technology			✓		✓
ASM International NV	AMS:ASM	None to Narrow	Technology			✓		✓

Source: Morningstar, PitchBook. Data as of March 27, 2025. Wolters Kluwer and RELX are technically classified as industrials, but we include them here as they have transitioned to data-based businesses.

Growing Complexity of Semiconductor Industry Prompted Upgrades to Wide Moat

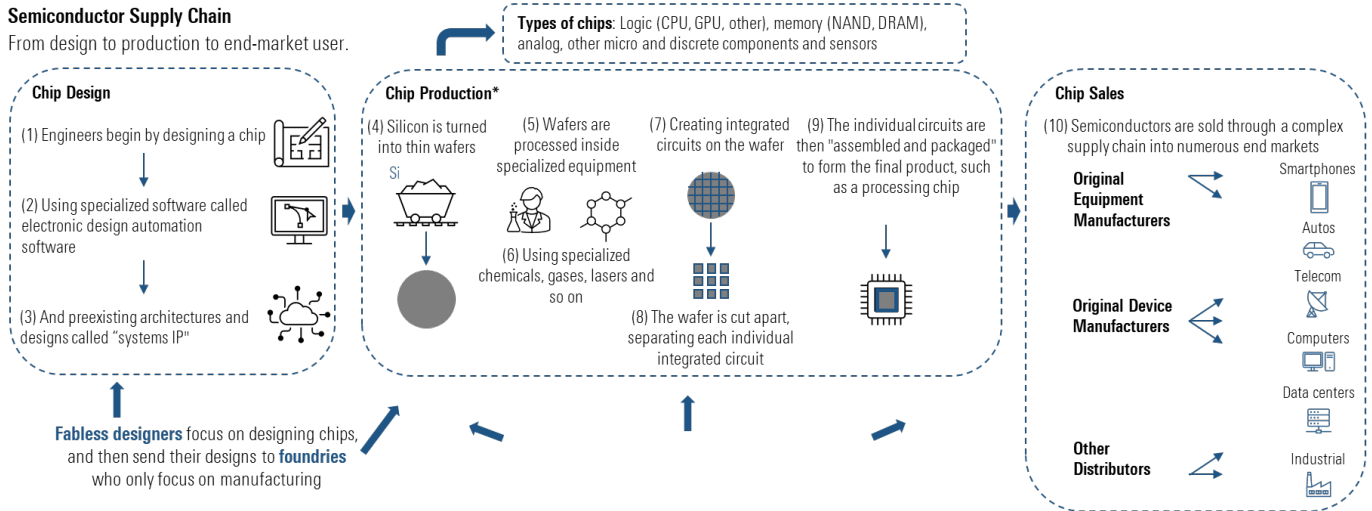
[Semiconductors Industry Landscape](#), September 2024

Many of the companies we upgraded in 2024 are in the semiconductor industry. Cadence Design Systems and Synopsys (design software), NXP Semiconductors (manufacturing), and Tokyo Electron (fabrication tools) were upgraded to wide, and ASM International (fabrication equipment) was upgraded to narrow. The common thread through these upgrades is the increasing complexity of the semiconductor manufacturing process, which is erecting more significant barriers to entry and strengthening the position of existing players. This is evident in the reliance on a combination of intangible assets and switching costs for all these companies.

Exhibit 19 The Semiconductor Industry Is Vast and Complex; Every Step Requires Specialized Players, Each Adding Value

Semiconductor Supply Chain

From design to production to end-market user.

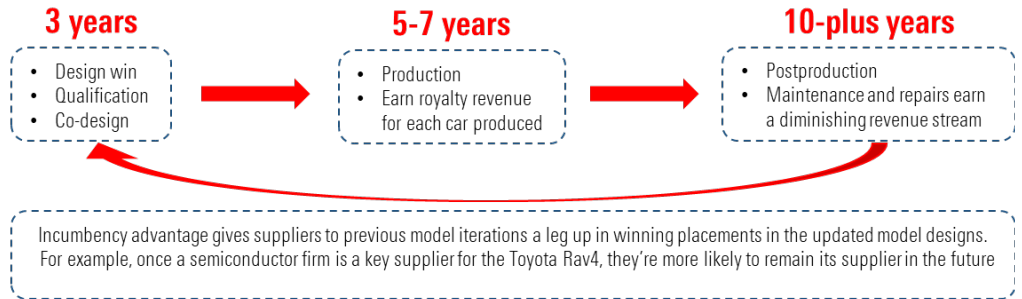


Source: Morningstar. Not every semiconductor product is a chip manufactured on a silicon wafer, but because this is the most common method, we use it to illustrate the basic concepts behind semiconductor production.

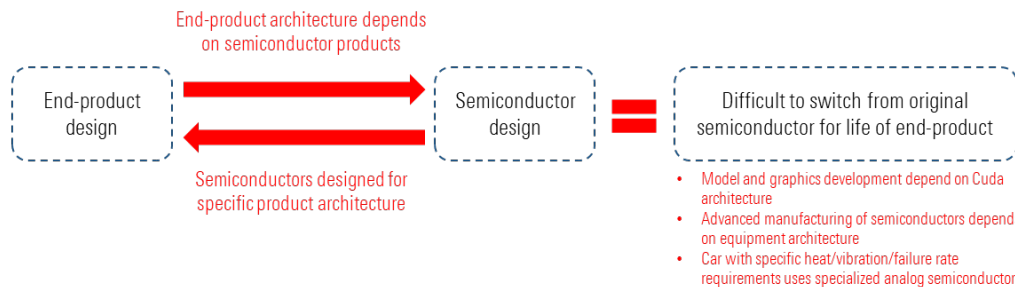
Those two advantages compound over time, making it difficult for new entrants. The intangible assets—largely the know-how—ensure that a supplier's products or services become ingrained in the end users' processes. This gives the supplier greater knowledge and experience, allowing for more productive and targeted R&D, further increasing the intangible assets' value and growing the lead over smaller outside firms. In this way, the semiconductor industry dynamic is like the typical industrial process. However, the dollar amounts and complexity are much more significant. So, although the technology industry is arguably more dynamic and riper for disruption, this is not necessarily the case for semiconductors, and the competitive advantages, once established, are stronger. In many cases, these companies operate in an oligopolistic market structure, resulting in high market share and few options for switching. In others, the market might be highly fragmented, but switching is prohibitive, given the onerous redesign costs.

Exhibit 20 Switching Costs Often Supplement Intangible Assets for Chipmakers

Auto Chipmakers Enjoy Switching Costs Arising From Long Product Cycles and Risk-Averse Customers

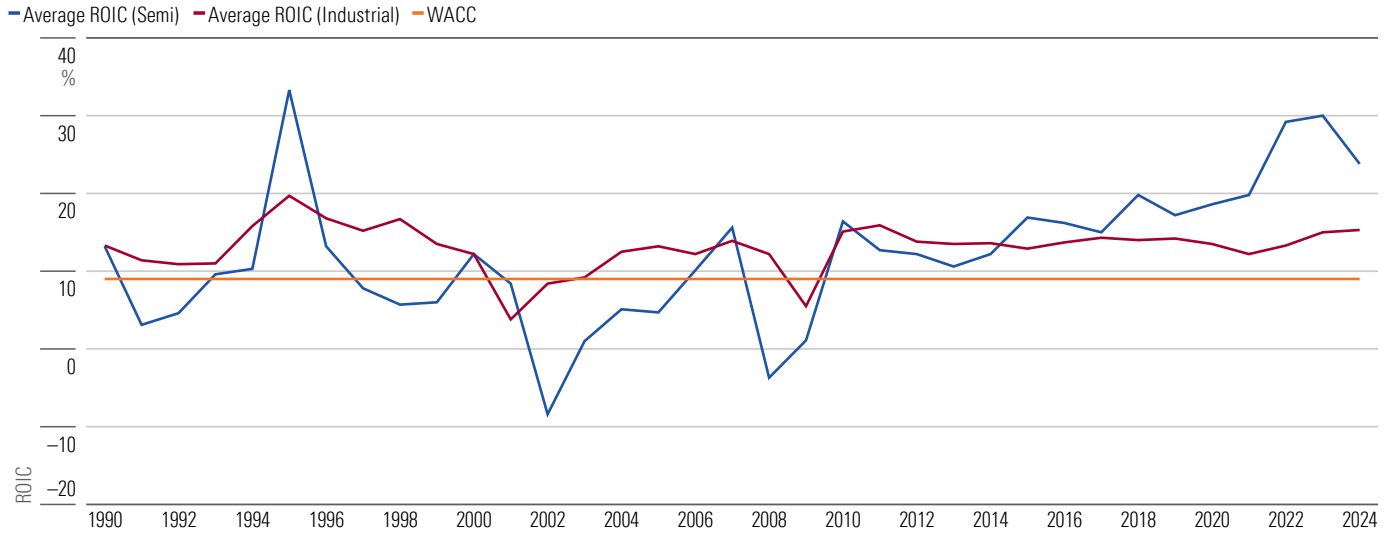


Anytime Products “Designed Around” Semiconductor-Related Components, Expect Higher Switching Costs



Source: Morningstar.

The two industries also have very different return on invested capital profiles. Whereas the industrial companies upgraded to wide have a demonstrated record of consistent returns, the semiconductor-related companies have a much more volatile return history. This reflects the semiconductor industry's cyclical nature. Our upgrades don't imply the end of this cyclical nature, even considering the strong tailwinds of investment in artificial intelligence. Instead, our moat upgrades for these firms reflect the strengthened competitive advantages and our greater confidence in excess returns extending for at least two more decades.

Exhibit 21 Semiconductor-Related Firms Have a Volatile ROIC History, but We Expect Them to Consistently Deliver Future Excess Returns

Source: Morningstar, PitchBook. Average and median returns of Cadence, Synopsys, NXP, Tokyo Electric, and ASM and industrials companies upgraded to wide moat during 2024. Data excludes GE Aerospace as historical records are unavailable.

Demand for High-Performance MLCCs Behind Upgrades for Murata and TDK

Murata and TDK were upgraded for reasons similar to those of the semiconductor companies. Both companies specialize in MLCCs—multilayer ceramic capacitors—which store electricity and stabilize electric flow; they are essential for eliminating electromagnetic noise, regulating current flow in a circuit, and enabling better battery life. As with semiconductors, demand for high-performance MLCCs with higher capacitance and higher reliability, which enables stable performance in the face of environmental changes, is expected to grow as data processed increases. We believe this continued demand for better performance creates a barrier to entry for MLCCs.

Murata has been the industry leader with 35%-40% share for the last two decades, while TDK's share is lower but focused on automotive, which has higher switching costs. Both have intangible assets reflecting their know-how and expertise in this black-box manufacturing process. These intangibles also reflect the two firms' participation in the oligopoly that provides the automotive powertrain, the most critical automobile component.

Both firms were upgraded after we witnessed a widening gap between Murata and TDK and their Chinese competitors. Murata also benefits from cost advantages from its large scale, which is at least twice that of its competitors, and the resulting superior product mix. The performance of MLCCs is improving every year as processor speeds and power consumption increase. For example, more and more capacitance is being realized for the same size of MLCC. Murata's larger scale is not only a matter of being able to bear fixed costs across a broader range of products and customers but also of being able to consistently achieve a better product mix than its competitors, as it allows more resources to be devoted to research and development.

Internet Proliferation Strengthens Competitive Position of Sony's Content Businesses

Sony's game and network services segment and music segment drove the company's upgrade from no moat to wide, as we believe these businesses have strengthened their competitiveness with the rise of the internet.

In the past, whenever a new game console was launched, the console maker had to build the user base from scratch. However, with the growth of the internet, every user creates a PlayStation Network account and downloads games to play. The PS5's backward compatibility with the PS4 allows game assets purchased in the past to be transferred to the next-generation platform, creating more stickiness and making users more likely to stay in the PlayStation ecosystem. With its over 120 million active users, we expect the PlayStation ecosystem to remain an attractive market for game developers, while its strong game assets and release of cutting-edge games and third-party titles attract new gamers.

The internet accelerated the pace of music consumption and intensified competition among artists, increasing the importance to musicians of the extensive global network of the three major labels, including Sony Music. Artists prefer to sign with a label with a one-stop support system, such as a larger production staff, active promotion strategies, and the ability to negotiate with digital streaming platforms such as Spotify and Apple Music, to increase the chances of their music being recognized. From this perspective, we believe that music labels are more important than ever, even though it is now possible for artists to interact and deliver music directly to users. Sony is also the world's largest music publisher, and the increasing use of music driven by the proliferation of the internet, such as YouTube, enables Sony to generate stable cash flow.

We find the list of technology companies with upgraded moat ratings is full of undervalued names. In semiconductors, there are NXP, Cadence, and Synopsys. Peers Murata and TDK are also meaningfully undervalued. Sony does not trade at the biggest discount but is rated 4 stars because of its lower uncertainty.

Exhibit 22 Most of Our Recent Tech Moat Upgrades Are Trading at a Discount

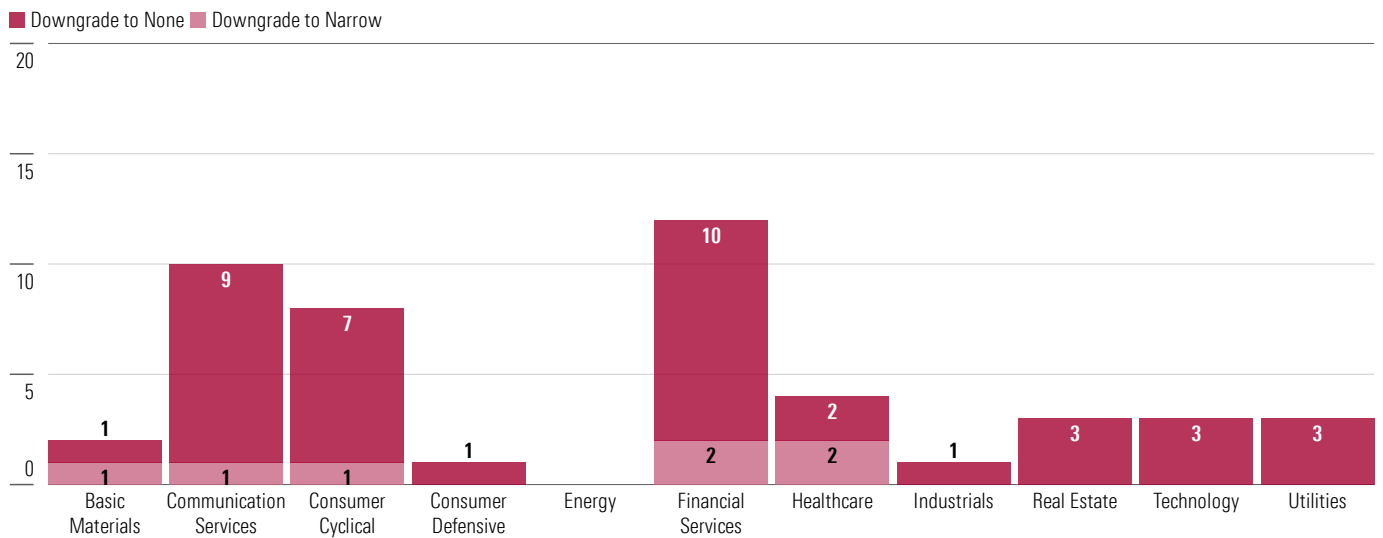
Company	Moat	FVE	Current Price	Price/Fair Value	Star rating
NXP Semiconductors	Wide	300.00	205.75	0.69	★★★★★
Murata Manufacturing Company	Wide	3,600.00	2,510.00	0.70	★★★★
TDK	Narrow	2200.00	1642.00	0.75	★★★★
Tokyo Electron	Wide	30,000.00	22,670.00	0.76	★★★★
Manhattan Associates	Wide	230.00	175.62	0.76	★★★★
Asm International	Narrow	590.00	452.00	0.77	★★★★
Synopsys	Wide	550.00	449.90	0.82	★★★★
Shopify	Wide	120.00	104.28	0.87	★★★
Cadence Design Systems	Wide	300.00	263.41	0.88	★★★
Sony	Wide	4,200.00	3,852.00	0.92	★★★★
Motorola Solutions	Wide	460.00	431.23	0.94	★★★
Wolters Kluwer	Wide	137.00	143.90	1.05	★★
RELX (Information Technology)	Wide	3650.00	3870.00	1.06	★★★
Descartes Systems Group	Wide	96.00	103.59	1.08	★★★

Source: Morningstar, PitchBook. Data as of March 27, 2025.

Financials, Consumer Cyclical, and Communication Services Had the Most Downgrades in 2024

During 2024, we downgraded 47 ratings, including seven to narrow from wide. Consumer cyclical, financial services, and communication services experienced the most downgrades.

Exhibit 23 Cumulative Moat Downgrades per Sector in 2024



Source: Morningstar, PitchBook. Data as of March 27, 2025.

Asset Managers Led Financial Services Downgrades While a Notable Name Lost Its Wide Moat

Exhibit 24 Financial Services Moat Downgrades in 2024

Company	Ticker	Moat Change	Sector	Network Effect	Efficient Scale	Intangible Assets	Cost Advantage	Customer Switching Costs
Berkshire Hathaway Inc	NYS:BRK.A	Wide to Narrow	Financial Services			✓	✓	
T. Rowe Price Group Inc	NAS:TROW	Wide to Narrow	Financial Services			✓		✓
Affiliated Managers Group Inc	NYS:AMG	Narrow to None	Financial Services					
BOC Hong Kong Holdings Ltd	HKG:02388	Narrow to None	Financial Services					
CI Financial Corp	TSE:CIX	Narrow to None	Financial Services					
Comerica Inc	NYS:CMA	Narrow to None	Financial Services					
Franklin Resources Inc	NYS:BEN	Narrow to None	Financial Services					
Hang Seng Bank Ltd	HKG:00011	Narrow to None	Financial Services					
Huntington Bancshares Inc	NAS:HBAN	Narrow to None	Financial Services					
IGM Financial Inc	TSE:IGM	Narrow to None	Financial Services					
Invesco Ltd	NYS:IVZ	Narrow to None	Financial Services					
Janus Henderson Group PLC	NYS:JHG	Narrow to None	Financial Services					

Source: Morningstar, PitchBook. Data as of March 27, 2025.

Notable Downgrade: Berkshire Hathaway No Longer Has a Wide Moat

The downgrade of Berkshire's wide moat rating to narrow might come as a surprise, but looking under the hood, it becomes more apparent for the following reasons.

Diminishing moat contributions from operating companies. Many of Berkshire's operating companies' competitive advantages have begun to diminish. While the individual segments might possess narrow moats, the aggregate strength is weakening.

The impact of Berkshire's sheer size and scale. The vast size of Berkshire's operations requires increasingly larger deals and stock investments to be meaningful, which ultimately limits its ability to generate outside returns.

Growing competition from private capital. Berkshire now faces increased competition from a growing pool of private capital seeking attractive deals, potentially reducing the exclusivity and advantageous terms that the company has historically enjoyed. This private capital also likely has less acquisition discipline than Berkshire CEO Warren Buffett does.

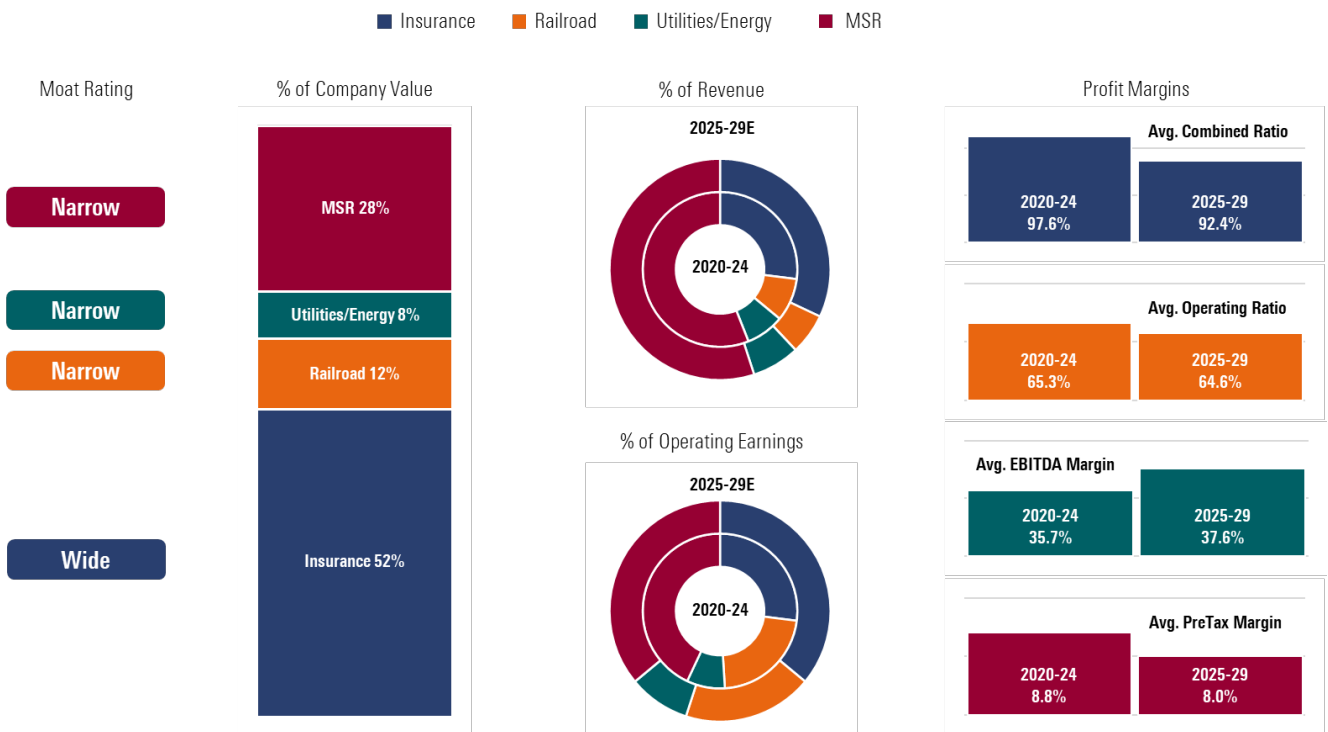
The impending departure of Warren Buffett. Buffett has been integral to Berkshire's success in allocating capital effectively and generating returns above the cost of capital. His ability to identify and invest in value-creating projects has significantly improved Berkshire's moat from narrow to wide. The company benefits from the Buffett seal of approval, which allows it to extract favorable terms from companies seeking cash infusions and affirming their business. This advantage is expected to diminish after Buffett's departure. While Berkshire has a collection of moaty businesses, management itself (especially

Buffett's capital allocation skills) has historically added to the firm's competitive advantages. The loss of this key element weakens the wide moat argument.

Lack of anticipated operational efficiencies before Buffett's departure. While Berkshire has the potential to improve through more directed operational efficiencies and financial engineering, we do not expect these changes to occur until after Buffett departs. Therefore, these potential improvements are not factored into the current moat rating.

In essence, the downgrade argument is that while Berkshire possesses a solid foundation of narrow moats across its various businesses, the factors that historically elevated it to a wide moat — particularly Buffett's exceptional capital allocation and the strength of deal-making due to his reputation — are either diminishing or temporary. The increasing challenges posed by size and competition bolster the view that a wide moat is not as strongly supported as it once was.

Exhibit 25 Berkshire's Underlying Businesses Have Narrow Moats, Given Recent Performance Deterioration



Source: Company reports, Morningstar.

Asset Managers Downgraded on Lack of Differentiation and Pricing Power

[US-Based Traditional Asset Manager Moats Continue to Narrow](#), October 2024

[US Asset Managers Industry Landscape](#), November 2024

Several US-based traditional asset managers saw their moats downgraded primarily due to a shifting balance of power with their primary distributors and the growth of low-cost passive products, leading to a continued narrowing of their economic moats. The 2022-23 market dislocation further exposed weaknesses in their intangible assets, prompting the downgrades.

Invesco

Previous advantage. Invesco possessed some moatworthy characteristics such as a well-known brand, well-forged distribution ties, repeatable investment strategies, and an ability to generate growth in organic assets under management. It was structurally diversified across asset classes, investment strategies, distribution channels, and geographic reach. It had a history of solid long-term organic AUM growth and profitability.

How it changed. Intangible assets have diminished more than expected. Invesco's retention rate has been lower than industry and group averages. The company faces fee compression due to a heavier reliance on the retail channel and increased flows into lower-fee passive products. It lacks enough differentiated products or services to command better pricing. Its investment performance has been weaker relative to peers. Consequently, its moat was lowered to none from narrow.

Franklin Resources

Previous advantage. Franklin had well-known brands, well-forged distribution ties, repeatable investment strategies, and a record of producing excess returns. It was diversified by geography and product/asset class.

How it changed. Intangible assets have weakened. The company's retention rate has been below industry and group averages. A reliance on the retail channel and a lack of differentiated products have led to ongoing fee compression. Problems at Western Asset Management are expected to reputational damage and outflows. Franklin exerts little control over its subsidiaries' investment disciplines. Its moat was lowered to none from narrow.

Affiliated Managers Group

Previous advantage. AMG possessed a portfolio of well-respected boutique asset managers and well-forged distribution channels. Its higher exposure to alternative strategies and institutional clients, along with a global distribution model, was seen as an advantage. It was proficient at investing in and maintaining relationships with boutique managers.

How it changed. AMG's moatworthy characteristics continue to diminish. It hasn't had a strong enough record of investment performance and manager reputation to generate consistent organic AUM growth. It faces greater competition from private capital funds for deals, and it has experienced higher operating

costs. AMG's lack of passive strategies and challenges with quantitative equity have also been headwinds. Its moat was lowered to none from narrow.

Janus Henderson Group

Previous advantage. Janus Henderson had a well-known brand, repeatable investment strategies, and a record of generating excess returns. It had a strong fixed-income business.

How it changed. Intangible assets continue to diminish. The company lacks differentiated products or services to improve retention and growth or blunt fee compression. Its retention rate has been lower than group and industry averages. It is less diversified from an asset class perspective, relying heavily on equities, which are more exposed to passive products. Its moat was lowered to none from narrow.

T. Rowe Price

Previous advantage. T. Rowe had a well-respected brand, attractive distribution with high retention rates, repeatable investment strategies, reasonable fees, and an impressive record of excess returns — characteristics worthy of a wide moat. It had high adjusted operating margins and low operating leverage.

How it changed. The company faced stiffer competition from passively managed target-date funds in the retirement channel. It experienced poorer three- and five-year investment performance. Its heavy concentration in the retirement channel became a double-edge sword. T. Rowe also decided to split its research platform, leading to higher operating leverage just as its AUM was stressed. Although it retains a better-than-average switching cost profile, the deterioration in these areas led to a downgrade to narrow from wide.

Exhibit 26 Economic Moat Heat Map for US-Based Traditional Asset Managers Covered by Morningstar

Coverage			Differentiation					Low Costs		Repeatable / Adaptable Processes			
Company	Ticker	Economic Moat	06/30/24 AUM (USD bil)	AUM Scale Efficiency	Product Breadth & Reach	Passive & Active Capabilities	Distribution Channel Strength	Switching Costs Strength	Fee Pricing Power	Fee Diversity & Exposure	Performance & Reputation	Culture & Stewardship	Capital Investment Efficiency
BlackRock	BLK	Wide	10,646	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive
Invesco	IVZ	None	1,716	Negative	Positive	Positive	Positive	Positive	Negative	Negative	Negative	Positive	Negative
Franklin Resources	BEN	None	1,647	Negative	Positive	Positive	Positive	Positive	Negative	Negative	Negative	Positive	Negative
T. Rowe Price	TROW	Narrow	1,569	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive
Federated Hermes	FHI	None	783	Negative	Positive	Positive	Positive	Positive	Negative	Negative	Negative	Positive	Negative
AllianceBernstein	AB	None	770	Negative	Positive	Positive	Positive	Positive	Negative	Negative	Negative	Positive	Negative
Affiliated Mgrs. Group	AMG	None	701	Positive	Positive	Positive	Positive	Positive	Negative	Negative	Negative	Positive	Negative
Janus Henderson	JHG	None	361	Negative	Positive	Positive	Positive	Positive	Negative	Negative	Negative	Positive	Negative
Cohen & Steers	CNS	Narrow	81	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive

■ Positive ■ Neutral ■ Negative

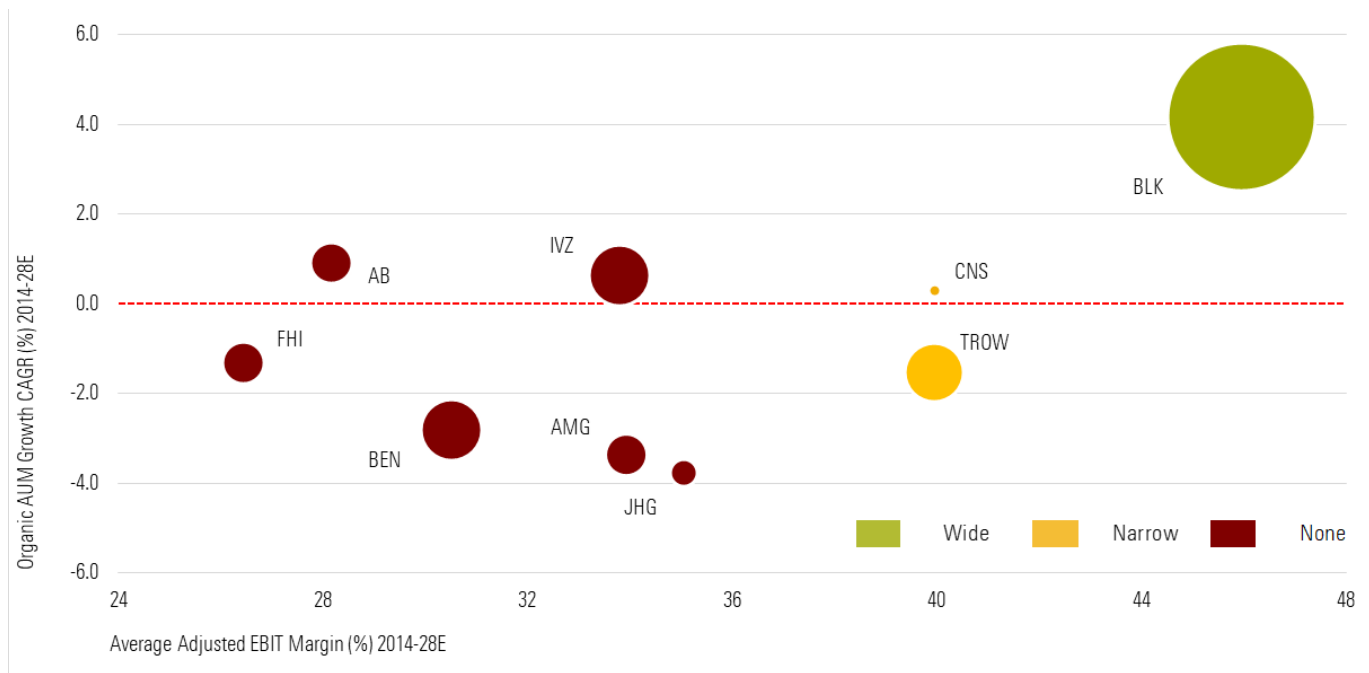
Source: Morningstar.

By the measures shown in Exhibit 26, BlackRock remains solidly in wide-moat territory. Its wide moat stems from intangible assets and switching costs that create a formidable market position.

The firm possesses valuable intangible assets including its trusted iShares and BlackRock brands, which consistently attract investment inflows. Its reputation for reliable long-term performance represents years of consistent results. BlackRock differentiates itself through excellence in risk management—highlighted by its proprietary Aladdin system, which serves internal needs and external clients—alongside product innovation and advice-driven solutions. Its diverse product offerings across asset classes and extensive global reach strengthen this foundation.

While it doesn't have high explicit switching costs, BlackRock benefits from factors promoting client retention. Inertia keeps clients from enduring the hassle of changing managers, compounded by uncertainty about finding better performance elsewhere and potential tax consequences from selling investments. Specialized products like retirement accounts carry inherently higher switching costs.

Exhibit 27 Scale, Operating Profitability, and Organic AUM Growth of Morningstar's US-Based Asset Manager Coverage



Source: Morningstar.

T. Rowe Price can be considered a potentially good investment due to its narrow moat, historically strong profitability, well-regarded brand, sticky asset base in the retirement sector, reasonable fees, and efforts to adapt its business. That said, investors should also be aware of increasing competition, recent performance challenges, and flow headwinds that the company is currently navigating. Our narrow moat rating and fair value estimate reflect these challenges, which we think the market is overly discounting at current prices.

Exhibit 28 Despite Downgrades, Some Asset Managers Look Attractive, While Berkshire Is Overvalued

Company	Moat	FVE	Current Price	Price/Fair Value	Star rating
T. Rowe Price Group	Narrow	125.00	94.44	0.76	★★★★
Invesco	None	19.00	15.69	0.83	★★★★
BOC Hong Kong Holdings	None	36.00	29.85	0.83	★★★★
Affiliated Managers Group	None	195.00	172.69	0.89	★★★
Hang Seng Bank	None	112.00	105.60	0.94	★★★
Franklin Templeton	None	21.00	19.86	0.95	★★★
IGM Financial	None	47.00	45.00	0.96	★★★
CI Financial	None	32.00	31.23	0.98	★★★
Janus Henderson Investors	None	38.00	37.50	0.99	★★★
Comerica Bank	None	59.00	60.31	1.02	★★★
Huntington National Bank	None	14.50	15.26	1.05	★★★
Berkshire Hathaway	Narrow	700,000.00	798,962.56	1.14	★★

Source: Morningstar, PitchBook. Data as of March 27, 2025.

Increased Competition and Weakening Brands Drive Consumer Cyclical Downgrades

Although the consumer cyclical downgrades are an eclectic group, we can find common themes among apparel-related names (Hugo Boss, VF, and Nordstrom) and vehicles (Harley-Davidson, BMW, and Mercedes-Benz). Rakuten's downgrade was the result of a capital allocation mistake when the company entered the mobile business. We discussed Advance Auto Parts [previously](#).

Exhibit 29 Consumer Cyclical Moat Downgrades in 2024

Company	Ticker	Moat Change	Sector	Network Effect	Efficient Scale	Intangible Assets	Cost Advantage	Customer Switching Costs
Harley-Davidson Inc	NYS:HOG	Wide to Narrow	Consumer Cyclical			✓		
Bayerische Motoren Werke AG	ETR:BMW	Narrow to None	Consumer Cyclical					
Mercedes-Benz Group AG	ETR:MBG	Narrow to None	Consumer Cyclical					
Hugo Boss AG	ETR:BOSS	Narrow to None	Consumer Cyclical					
VF Corp	NYS:VFC	Narrow to None	Consumer Cyclical					
Rakuten Group Inc	TKS:4755	Narrow to None	Consumer Cyclical					
Advance Auto Parts Inc	NYS:AAP	Narrow to None	Consumer Cyclical					
Nordstrom Inc	NYS:JWN	Narrow to None	Consumer Cyclical					

Source: Morningstar, PitchBook. Data as of March 27, 2025.

Apparel Downgrades Have Four Reasons in Common

[Luxury Goods Industry Landscape](#), November 2024

The moat downgrades for VF, Nordstrom, and Hugo Boss share four key themes: intensifying competition, diminishing brand relevance, adaptation failures, and margin pressure.

Increased Competition

VF operates in an increasingly crowded casual athletic market that faces pressure from new entrants as well as established competitors' innovations.

Nordstrom is confronting heightened competition across core categories (beauty, apparel, jewelry, accessories) from physical and digital retailers, direct-to-consumer brand initiatives, and specialty stores. Its Rack division competes in a crowded off-price segment.

Hugo Boss competes in a fragmented premium apparel sector with minimal barriers to entry in casualwear.

Weakening Brand Strength

VF's major brands have deteriorated, losing relevance among consumers. Vans has experienced declining sales as styles grow stale and consumers migrate to newer competitors.

Nordstrom's customer service reputation and exclusive brand relationships no longer provide a sufficient competitive advantage. Its full-price stores have underperformed as multibrand luxury fashion retailers have lost share to online sellers and brands' owned channels

Hugo Boss demonstrates inferior metrics versus luxury peers in pricing power and brand visibility. Previous attempts at luxury positioning failed, exposing limitations in brand aspirational appeal.

Adaptation Failures

VF has lagged consumer trends with inadequate product innovation. Vans has maintained historical designs while fashion has evolved.

Nordstrom's traditional department store format has struggled with e-commerce growth and shifting shopping patterns. Digital initiatives have not made up for losses in store traffic.

Hugo Boss faces structural challenges to its core formalwear business amid casualization trends. While it's expanding into casualwear, this segment offers fewer competitive protections.

Profitability Pressure

VF's declining sales across segments have eroded profitability. Increased discounting, particularly for Vans, compressed margins.

Nordstrom's operating margins have deteriorated over the past decade and are unlikely to recover. Online sales growth is less profitable and reduces in-store revenue.

Hugo Boss maintains lower pricing and reduced gross margins versus luxury competitors, reflecting profitability challenges in its premium apparel segment.

Auto and Motorcycle Makers Face Similar Competitive Pressures

[Recreational Vehicles Industry Landscape](#), October 2024

The moat downgrades for Harley-Davidson, BMW, and Mercedes-Benz share three key themes: intensifying competition, diminishing brand strength, and challenges adapting to market evolution.

Increased Competition

Harley-Davidson's leadership position has eroded from pre-pandemic levels, even though the company maintains significant US heavyweight motorcycle market share. Smaller domestic brands are demonstrating growth capability.

BMW and Mercedes-Benz face heightened competition, particularly in electric vehicles and entry- to mid-level vehicles and from Chinese manufacturers. We estimate margins of their lower-tier vehicles, which make up the majority of sales volume, are on par with those of mass-market automakers. This pressure affects share and profitability in an increasingly fragmented global automotive market.

Weakening Brand Strength

Harley-Davidson's brand advantage has deteriorated, reducing confidence in its market share durability and margin protection. Average selling price increases have become inconsistent.

BMW and Mercedes-Benz maintain high brand rankings, but brands overall are becoming less influential to vehicle consumers. Both automakers face challenges in China, where profitability metrics appear unlikely to recover. BMW has had trouble maintaining price increases in China, while Mercedes faces rising brand maintenance costs.

Adaptation Challenges

Harley-Davidson is seeing demand shifts toward midweight and lighter motorcycles. Its LiveWire electric initiative generates significant operating losses amid demographic challenges as baby boomers age out of riding and younger consumers face discretionary income constraints.

BMW and Mercedes-Benz trail in electric vehicle adoption in China despite rapid market penetration. This product gap affects their appeal to Chinese consumers. New entrants are achieving superior quality ratings in both Western and Eastern markets as consumer priorities shift to price, quality, and performance over brand familiarity. A shift in consumer preferences for software capabilities over mechanical engineering, where these two makers' legacy competitive strength lies, favors new brands.

All three companies confront intensified competition that tests their historical brand advantages, particularly in evolving segments like electric vehicles, resulting in pressure on market share and profitability and economic moat reassessment.

Exhibit 30 Some No-Moat Consumer Cyclical Names Are Undervalued

Company	Moat	FVE	Current Price	Price/Fair Value	Star rating
VF	None	40.00	16.32	0.41	★★★★★
Mercedes-Benz Group	None	106.00	58.03	0.55	★★★★★
Hugo Boss	None	57.00	36.48	0.64	★★★★★
BMW Group	None	117.00	79.28	0.68	★★★★
Advance Auto Parts (Automotive)	None	51.00	37.82	0.74	★★★★
Harley-Davidson	Narrow	29.00	25.96	0.90	★★★
Rakuten Group	None	990.00	905.70	0.91	★★★
Nordstrom	None	24.50	24.43	1.00	★★★

Source: Morningstar, PitchBook. Data as of March 27, 2025.

Disruption to Traditional Media Landscape Drives Communication Services Downgrades

Among the downgrades in communication services, those of five media companies stand out: Warner Bros. Discovery, Paramount Global, Sirius XM, Fox, and AMC Networks. The downgrades reflect a common concern that these media companies, heavily reliant on older distribution models, are under significant pressure. Our confidence in their ability to successfully transition to streaming, compete with new well-funded players, and maintain or establish strong competitive advantages in this evolving landscape is fading. These downgrades result from disruption in the traditional media landscape and the challenges in adapting to new consumption patterns and competitive forces.

Exhibit 31 Communication Services Moat Downgrades in 2024

Company	Ticker	Moat Change	Sector	Network Effect	Efficient Scale	Intangible Assets	Cost Advantage	Customer Switching Costs
Comcast Corp	NAS:CMCSA	Wide to Narrow	Communication Services		✓		✓	
Quebecor Inc	TSE:QBR.B	Narrow to None	Communication Services					
StarHub Ltd	SES:CC3	Narrow to None	Communication Services					
Singapore Telecommunications Ltd	SES:Z74	Narrow to None	Communication Services					
Sirius XM Holdings Inc	NAS:SIRI	Narrow to None	Communication Services					
TPG Telecom Ltd	ASX:TPG	Narrow to None	Communication Services					
Fox Corp	NAS:FOXA	Narrow to None	Communication Services					
AMC Networks Inc	NAS:AMCX	Narrow to None	Communication Services					
Warner Bros. Discovery Inc	NAS:WBD	Narrow to None	Communication Services					
Paramount Global	NAS:PARA	Narrow to None	Communication Services					

Source: Morningstar, PitchBook. Data as of Feb. 13, 2025.

Secular Decline of Linear Television and Pay-TV Bundles

This is a central theme for Paramount, Warner Bros. Discovery, AMC Networks, and Fox. Their historical strength was tied to the reach and profitability of their linear television networks and the associated affiliate fees from the pay-TV bundle. However, there has been a significant and ongoing decline in pay-TV subscribers and linear viewership. We doubt that even successful streaming efforts can replicate the favorable economics of the traditional pay-TV model.

Struggles in Transition to Streaming

While many of these companies have launched streaming platforms, streaming doesn't appear to be as profitable as traditional linear television. The reach of Paramount+ is not yet comparable to that of the largest streaming platforms. AMC Networks is anticipated to have difficulty consistently generating attractive content for its AMC+6 streaming service. Even though Warner Bros. Discovery's Max has a substantial subscriber base and is becoming profitable, its streaming business is unlikely to backfill the earnings of its linear television business.

Increased Competition From New Entrants and Established Players

The rise of streaming has introduced intense competition from well-capitalized tech companies. These companies often don't have the burden of declining legacy businesses and may not need their streaming platforms to be immediate profit drivers. For Paramount, platforms from Netflix and Big Tech have become equally or more desirable entertainment outlets than traditional TV networks. AMC Networks faces competition from firms with deeper content libraries and franchises. Sirius XM now competes directly with ubiquitous music streaming services like Spotify.

Erosion of Distribution Advantages

The traditional distribution advantages held by linear networks are diminishing. Networks like CBS and Showtime no longer operate in the same oligopoly for reaching consumers. While broadcast networks still have wide reach, this alone is not seen as a sufficient moat. For Sirius XM, the necessity of custom radios in vehicles has been overcome by in-car internet connectivity and infotainment systems.

Importance of Content and Challenges of Securing It

The ability to create and own compelling content remains crucial. Major studios like Paramount and Warner Bros. still have advantages in their production capabilities, relationships with talent, and distribution networks. However, even these advantages are being challenged by well-funded tech companies entering content creation. AMC Networks, due to its smaller size, is seen as struggling to secure sufficient content. Fox's broadcast network relies heavily on licensing content and faces increasing competition for sports rights.

Insufficient Scale and Resources

AMC Networks is explicitly noted as having insufficient scale to compete with larger peers that have greater financial resources to invest in content and talent. This lack of scale makes negotiating with pay-TV distributors and attracting subscribers to its streaming service difficult. Even Sirius XM's Pandora segment suffers from a lack of scale compared with industry leaders like Spotify.

Although we view many of these firms' competitive positions as weakened, in some cases we still see value. Our fair value estimates reflect their lack of moat, but the market seems even more dour about their outlook, creating opportunity in some no-moat names. ■■

Exhibit 32 Despite Moat Downgrades, Many Communication Services Firms Look Cheap

Company	Moat	FVE	Current Price	Price/Fair Value	Star rating
AMC Networks	None	15.00	7.18	0.48	★★★★★
Warner Bros. Discovery	None	20.00	11.03	0.55	★★★★
Paramount Global	None	20.00	11.86	0.59	★★★★
TPG Telecom	None	6.40	4.85	0.76	★★★★
Comcast	Narrow	49.00	37.37	0.76	★★★★
Sirius XM Holdings	None	30.00	23.95	0.80	★★★★
Quebecor	None	37.00	35.76	0.97	★★★
Singtel	None	3.47	3.39	0.98	★★★
StarHub	None	1.20	1.19	0.99	★★★
Fox	None	50.00	55.21	1.10	★★★

Source: Morningstar, PitchBook. Data as of March 27, 2025.

Appendix

Exhibit 1A 2024 Moat Upgrades

Name	FY 2024	FY 2023	Sector	Analyst	Currency	FVE	Price/Fair		Star rating
	Moat	Moat					Value	Value	
The Kraft Heinz Co KHC	Narrow	None	Consumer Defensive	Erin Lash, CFA	USD	56.00	0.53	★★★★★	
Bio-Rad Laboratories Inc BIO	Wide	Narrow	Healthcare	Jay Lee	USD	400.00	0.61	★★★★	
Norwegian Cruise Line Holdings Ltd NCLH	Narrow	None	Consumer Cyclical	Jaime M. Katz, CFA	USD	31.50	0.64	★★★★	
Unicharm Corp 8113	Wide	Narrow	Consumer Defensive	Jacky Tsang	JPY	1800.00	0.66	★★★★★	
Koninklijke Philips NV PHIA	Wide	Narrow	Healthcare	Alex Morozov, CFA	EUR	35.00	0.67	★★★★	
Carnival Corp CCL	Narrow	None	Consumer Cyclical	Jaime M. Katz, CFA	USD	31.00	0.68	★★★★	
NXP Semiconductors NV NXPI	Wide	Narrow	Technology	Brian Colello, CPA	USD	300.00	0.69	★★★★★	
Murata Manufacturing Co Ltd 6981	Wide	Narrow	Technology	Kazunori Ito	JPY	3600.00	0.70	★★★★	
DraftKings Inc DKNG	Narrow	None	Consumer Cyclical	Dan Wasiolek	USD	53.00	0.71	★★★★	
TDK Corp 6762	Narrow	None	Technology	Kazunori Ito	JPY	2200.00	0.75	★★★★	
Tokyo Electron Ltd 8035	Wide	Narrow	Technology	Kazunori Ito	JPY	30000.00	0.76	★★★★	
Manhattan Associates MANH	Wide	Narrow	Technology	Dan Romanoff, CPA	USD	230.00	0.76	★★★★	
ASM International NV ASM	Narrow	None	Technology	Javier Correonero	EUR	590.00	0.77	★★★★	
DexCom Inc DXCM	Narrow	None	Healthcare	Debbie S. Wang	USD	94.00	0.77	★★★★	
Danaher Corp DHR	Wide	Narrow	Healthcare	Julie Utterback, CFA	USD	270.00	0.78	★★★★	
E.ON SE EOAN	Narrow	None	Utilities	Tancrede Fulop, CFA	EUR	17.00	0.79	★★★★	
Reliance Worldwide Corp Ltd RWC	Narrow	None	Industrials	Esther Holloway	AUD	5.70	0.79	★★★★	
Swedish Orphan Biovitrum AB SOBI	Narrow	None	Healthcare	Rachel Elfman	SEK	357.00	0.81	★★★★	
Synopsys Inc SNPS	Wide	Narrow	Technology	Eric Compton, CFA	USD	550.00	0.82	★★★★	
Universal Music Group NV UMG	Wide	Narrow	Communication Services	Matthew Dolgin, CFA	EUR	31.00	0.82	★★★★	
Nordson Corp NDSN	Wide	Narrow	Industrials	Krzysztof Smalec, CFA	USD	246.00	0.84	★★★★	
Sea Ltd SE	Narrow	None	Consumer Cyclical	Chelsey Tam	USD	153.00	0.84	★★★★	
Veolia Environnement SA VIE	Narrow	None	Industrials	Tancrede Fulop, CFA	EUR	37.50	0.85	★★★★	
IDEX Corp IEX	Wide	Narrow	Industrials	Krzysztof Smalec, CFA	USD	217.00	0.85	★★★★	
Shopify Inc SHOP	Wide	Narrow	Technology	Dan Romanoff, CPA	USD	120.00	0.87	★★★	
Cadence Design Systems Inc CDNS	Wide	Narrow	Technology	Eric Compton, CFA	USD	300.00	0.88	★★★	
Gildan Activewear Inc GIL	Narrow	None	Consumer Cyclical	David Swartz	USD	50.00	0.88	★★★	
Air Products & Chemicals Inc APD	Wide	Narrow	Basic Materials	Krzysztof Smalec, CFA	USD	333.00	0.89	★★★	
Sony Group Corp 6758	Wide	None	Technology	Kazunori Ito	JPY	4200.00	0.92	★★★★★	
Motorola Solutions Inc MSI	Wide	Narrow	Technology	Eric Compton, CFA	USD	460.00	0.94	★★★★	
Air Liquide SA AI	Wide	Narrow	Basic Materials	Krzysztof Smalec, CFA	EUR	187.00	0.95	★★★	
Marriott International Inc MAR	Wide	Narrow	Consumer Cyclical	Dan Wasiolek	USD	260.00	0.95	★★★	
InterContinental Hotels Group PLC IHG	Wide	Narrow	Consumer Cyclical	Dan Wasiolek	USD	115.00	0.97	★★★	
Smiths Group PLC SMIN	Wide	Narrow	Industrials	Grant Slade, CFA	GBX	2030.00	0.97	★★★	
Raymond James Financial Inc RJF	Narrow	None	Financial Services	Michael Wong, CFA	USD	147.00	0.98	★★★	
Eaton Corp PLC ETN	Wide	Narrow	Industrials	Nicholas Lieb, CFA	USD	288.00	0.99	★★★	
Hilton Worldwide Holdings Inc HLT	Wide	Narrow	Consumer Cyclical	Dan Wasiolek	USD	225.00	1.04	★★★	
Wolters Kluwer NV WKL	Wide	Narrow	Technology	Rob Hales, CFA	EUR	137.00	1.05	★★	
AMETEK Inc AME	Wide	Narrow	Industrials	Nicholas Lieb, CFA	USD	168.00	1.05	★★★★	
Linde PLC LIN	Wide	Narrow	Basic Materials	Krzysztof Smalec, CFA	USD	437.00	1.06	★★★	
RELX PLC REL	Wide	Narrow	Technology	Rob Hales, CFA	GBX	3650.00	1.06	★★★	
GE Aerospace GE	Wide	Narrow	Industrials	Nicolas Owens	USD	195.00	1.06	★★★	
The Descartes Systems Group Inc DSGX	Wide	Narrow	Technology	Dan Romanoff, CPA	USD	96.00	1.08	★★★	
IDEXX Laboratories Inc IDXX	Wide	Narrow	Healthcare	Debbie S. Wang	USD	385.00	1.08	★★★	
AbbVie Inc ABBV	Wide	Narrow	Healthcare	Karen Andersen, CFA	USD	184.00	1.09	★★★	
Ameren Corp AEE	Narrow	None	Utilities	Andrew Bischof, CFA	USD	88.00	1.12	★★	
OGE Energy Corp OGE	Narrow	None	Utilities	Travis Miller	USD	39.00	1.15	★★	
Royal Caribbean Group RCL	Narrow	None	Consumer Cyclical	Jaime M. Katz, CFA	USD	185.00	1.19	★★	
Illinois Tool Works Inc ITW	Wide	Narrow	Industrials	Nicholas Lieb, CFA	USD	215.00	1.19	★★	
GE Vernova Inc GEV	Narrow	None	Utilities	Brett Castelli	USD	265.00	1.20	★★	

Exhibit 1A 2024 Moat Upgrades (Continued)

Super Retail Group Ltd SUL	Narrow	None	Consumer Cyclical	Johannes Faul, CFA	AUD	11.00	1.20	★★
Spotify Technology SA SPOT	Narrow	None	Communication Services	Matthew Dolgin, CFA	USD	450.00	1.28	★★
AutoZone Inc AZO	Wide	Narrow	Consumer Cyclical	Noah Rohr	USD	2830.00	1.30	★★
Dick's Sporting Goods Inc DKS	Narrow	None	Consumer Cyclical	David Swartz	USD	155.00	1.33	★★
SGH Ltd SGH	Narrow	None	Industrials	Mark Taylor	AUD	37.00	1.38	★
Dassault Aviation SA AM	Wide	Narrow	Industrials	Loredana Muharremi	EUR	227.00	1.39	★
O'Reilly Automotive Inc ORLY	Wide	Narrow	Consumer Cyclical	Noah Rohr	USD	920.00	1.50	★
ALS Ltd ALQ	Narrow	None	Industrials	Mark Taylor	AUD	10.50	1.51	★

Source: Morningstar, PitchBook. Data as of March 27, 2025.

Exhibit 2A 2024 Moat Downgrades

Name	FY 2024 Moat	FY 2023 Moat	Sector	Analyst	Currency	FVE	Price/Fair Value	Star rating
VF Corp VFC	None	Narrow	Consumer Cyclical	David Swartz	USD	40.00	0.41	★★★★★
AMC Networks Inc AMCX	None	Narrow	Communication Services	Matthew Dolgin, CFA	USD	15.00	0.48	★★★★★
Compass Minerals International Inc CMP	Narrow	Wide	Basic Materials	Seth Goldstein, CFA	USD	20.00	0.48	★★★★
Mercedes-Benz Group AG MBG	None	Narrow	Consumer Cyclical	Rella Suskin, CFA	EUR	106.00	0.55	★★★★★
Warner Bros. Discovery Inc WBD	None	Narrow	Communication Services	Matthew Dolgin, CFA	USD	20.00	0.55	★★★★
Paramount Global PARA	None	Narrow	Communication Services	Matthew Dolgin, CFA	USD	20.00	0.59	★★★★
Hugo Boss AG BOSS	None	Narrow	Consumer Cyclical	Jelena Sokolova, CFA	EUR	57.00	0.64	★★★★★
Biogen Inc BIIB	Narrow	Wide	Healthcare	Jay Lee	USD	220.00	0.65	★★★★
Bayerische Motoren Werke AG BMW	None	Narrow	Consumer Cyclical	Rella Suskin, CFA	EUR	117.00	0.68	★★★★
Aurizon Holdings Ltd AZJ	None	Narrow	Industrials	Adrian Atkins	AUD	4.50	0.69	★★★★
Advance Auto Parts Inc AAP	None	Narrow	Consumer Cyclical	Noah Rohr	USD	51.00	0.74	★★★★
T. Rowe Price Group Inc TROW	Narrow	Wide	Financial Services	Greggory Warren, CFA	USD	125.00	0.76	★★★★
TPG Telecom Ltd TPG	None	Narrow	Communication Services	Brian Han	AUD	6.40	0.76	★★★★
Comcast Corp CMCSA	Narrow	Wide	Communication Services	Michael Hodel, CFA	USD	49.00	0.76	★★★★
Dexus DXS	None	Narrow	Real Estate	Yingqi Tan	AUD	9.60	0.77	★★★★
Medtronic PLC MDT	Narrow	Wide	Healthcare	Debbie S. Wang	USD	112.00	0.79	★★★★
Sirius XM Holdings Inc SIRI	None	Narrow	Communication Services	Matthew Dolgin, CFA	USD	30.00	0.80	★★★★
Lyft Inc LYFT	None	Narrow	Technology	Mark Giarelli	USD	15.00	0.82	★★★
Invesco Ltd IVZ	None	Narrow	Financial Services	Greggory Warren, CFA	USD	19.00	0.83	★★★★
Twilio Inc TWLO	None	Narrow	Technology	Dan Romanoff, CPA	USD	120.00	0.87	★★★
Anhui Conch Cement Co Ltd 00914	None	Narrow	Basic Materials	Jeff Zhang, CFA	HKD	26.00	0.88	★★★
Affiliated Managers Group Inc AMG	None	Narrow	Financial Services	Greggory Warren, CFA	USD	195.00	0.89	★★★
AGL Energy Ltd AGL	None	Narrow	Utilities	Adrian Atkins	AUD	12.00	0.89	★★★
Harley-Davidson Inc HOG	Narrow	Wide	Consumer Cyclical	Jaime M. Katz, CFA	USD	29.00	0.90	★★★
BOC Hong Kong Holdings Ltd 02388	None	Narrow	Financial Services	Michael Makdad	HKD	33.00	0.90	★★★★
Rakuten Group Inc 4755	None	Narrow	Consumer Cyclical	Kazunori Ito	JPY	990.00	0.91	★★★
Sino Biopharmaceutical Ltd 01177	None	Narrow	Healthcare	Yurou Zheng	HKD	3.93	0.92	★★★
BWP Trust BWP	None	Narrow	Real Estate	Adrian Atkins	AUD	3.80	0.92	★★★
Hang Seng Bank Ltd 00011	None	Narrow	Financial Services	Michael Makdad	HKD	112.00	0.94	★★★
Franklin Resources Inc BEN	None	Narrow	Financial Services	Greggory Warren, CFA	USD	21.00	0.95	★★★
IGM Financial Inc IGM	None	Narrow	Financial Services	Greggory Warren, CFA	CAD	47.00	0.96	★★★
Takeda Pharmaceutical Co Ltd 4502	None	Narrow	Healthcare	Jay Lee	JPY	4700.00	0.96	★★★
Quebecor Inc QBR.B	None	Narrow	Communication Services	Samuel Siampaus	CAD	37.00	0.97	★★★
CI Financial Corp CIX	None	Narrow	Financial Services	Greggory Warren, CFA	CAD	32.00	0.98	★★★
Singapore Telecommunications Ltd Z74	None	Narrow	Communication Services	Dan Baker	SGD	3.47	0.98	★★★
Janus Henderson Group PLC JHG	None	Narrow	Financial Services	Greggory Warren, CFA	USD	38.00	0.99	★★★
StarHub Ltd CC3	None	Narrow	Communication Services	Dan Baker	SGD	1.20	0.99	★★★
Nordstrom Inc JWN	None	Narrow	Consumer Cyclical	David Swartz	USD	24.50	1.00	★★★
DocuSign Inc DOCU	None	Narrow	Technology	Dan Romanoff, CPA	USD	86.00	1.01	★★★
Comerica Inc CMA	None	Narrow	Financial Services	Maoyuan Chen	USD	59.00	1.02	★★★
Digital Realty Trust Inc DLR	None	Narrow	Real Estate	Samuel Siampaus	USD	144.00	1.04	★★★

Exhibit 2A 2024 Moat Downgrades (Continued)

Huntington Bancshares Inc HBAN	None	Narrow	Financial Services	Maoyuan Chen	USD	14.50	1.05	★★★
Hawaiian Electric Industries Inc HE	None	Narrow	Utilities	Andrew Bischof, CFA	USD	10.00	1.09	★★★
Fox Corp FOXA	None	Narrow	Communication Services	Matthew Dolgin, CFA	USD	50.00	1.10	★★★
The Kroger Co KR	None	Narrow	Consumer Defensive	Noah Rohr	USD	59.00	1.12	★★
Berkshire Hathaway Inc BRK.A	Narrow	Wide	Financial Services	Greggory Warren, CFA	USD	700000.00	1.14	★★
Pinnacle West Capital Corp PNW	None	Narrow	Utilities	Travis Miller	USD	80.00	1.16	★★

Source: Morningstar, PitchBook. Data as of March 27, 2025.

Exhibit 3A 2024 Initiations

Name	FY 2024			Analyst	Currency	FVE	Price/Fair		Star rating
	Moat	Sector					Value		
Audinate Group Ltd AD8	Narrow	Technology		Roy Van Keulen	AUD	19.00	0.35		★★★★★
SiteMinder Ltd SDR	Narrow	Technology		Roy Van Keulen	AUD	10.00	0.48		★★★★★
Johns Lyng Group Ltd JLG	Narrow	Industrials		Esther Holloway	AUD	4.30	0.54		★★★★★
Pilbara Minerals Ltd PLS	Narrow	Basic Materials		Esther Holloway	AUD	3.40	0.54		★★★★★
CSI Solar Co Ltd 688472	None	Technology		Cheng Wang, CFA	CNY	17.70	0.58		★★★★
JA Solar Technology Co Ltd 002459	None	Technology		Cheng Wang, CFA	CNY	22.00	0.59		★★★★★
IGO Ltd IGO	Narrow	Basic Materials		Esther Holloway	AUD	7.00	0.59		★★★★★
Trina Solar Co Ltd 688599	None	Technology		Cheng Wang, CFA	CNY	30.90	0.59		★★★★★
Jinko Solar Co Ltd 688223	None	Technology		Cheng Wang, CFA	CNY	11.00	0.64		★★★★
Melrose Industries PLC MRO	Wide	Industrials		Loredana Muharremi	GBX	800.00	0.66		★★★★★
Daikin Industries Ltd 6367	Narrow	Industrials		Jeff Zhang, CFA	JPY	25000.00	0.69		★★★★★
ZJLD Group Inc 06979	Narrow	Consumer Defensive		Jennifer Song	HKD	10.50	0.69		★★★★
Oriental Land Co Ltd 4661	Wide	Consumer Cyclical		Kazunori Ito	JPY	4450.00	0.70		★★★★
Orora Ltd ORA	None	Consumer Cyclical		Esther Holloway	AUD	2.80	0.70		★★★★
Puig Brands SA PUIG	None	Consumer Defensive		Dan Su, CFA	EUR	23.00	0.70		★★★★
Clarivate PLC CLVT	None	Technology		Rob Hales, CFA	USD	5.50	0.73		★★★★
Adicon Holdings Ltd 09860	None	Healthcare		Yurou Zheng	HKD	9.90	0.74		★★★★
Evotec SE EVT	None	Healthcare		Rachel Elfman	EUR	8.50	0.74		★★★★
Elanco Animal Health Inc ELAN	None	Healthcare		Debbie S. Wang	USD	14.00	0.75		★★★★
Freshpet Inc FRPT	None	Consumer Defensive		Kristoffer Inton	USD	111.00	0.77		★★★★
Repligen Corp RGEN	Narrow	Healthcare		Jay Lee	USD	180.00	0.77		★★★★
Acuity Brands, Inc. AYI	Narrow	Industrials		Brett Castelli	USD	350.00	0.78		★★★★
Renesas Electronics Corp 6723	Narrow	Technology		Phelix Lee	JPY	3000.00	0.78		★★★★
Olympus Corp 7733	Narrow	Healthcare		Yurou Zheng	JPY	2560.00	0.79		★★★★
Monday.Com Ltd MNDY	None	Technology		Eric Compton, CFA	USD	332.00	0.80		★★★
Haier Smart Home Co Ltd 600690	Narrow	Consumer Cyclical		Jeff Zhang, CFA	CNY	35.00	0.80		★★★★
Siemens Healthineers AG SHL	Wide	Healthcare		Alex Morozov, CFA	EUR	63.00	0.81		★★★★
Hoya Corp 7741	Wide	Healthcare		Yurou Zheng	JPY	22000.00	0.81		★★★★
Coupang Inc CPNG	Narrow	Consumer Cyclical		Chelsey Tam	USD	29.10	0.81		★★★★
China Tourism Group Duty Free Corp Ltd 01880	Narrow	Consumer Cyclical		Jennifer Song	HKD	62.00	0.81		★★★★
Liberty Financial Group Ltd LFG	None	Financial Services		Nathan Zaia	AUD	4.50	0.82		★★★★
IPH Ltd IPH	None	Industrials		Shaun Ler	AUD	5.60	0.83		★★★★
GE HealthCare Technologies Inc GEHC	Wide	Healthcare		Jay Lee	USD	98.00	0.83		★★★★
Flutter Entertainment PLC FLUT	Narrow	Consumer Cyclical		Dan Wasiolek	USD	279.00	0.85		★★★
A.O. Smith Corp AOS	Wide	Industrials		Brian Bernard, CFA, CPA	USD	79.00	0.85		★★★★
McMillan Shakespeare Ltd MMS	None	Industrials		Shaun Ler	AUD	17.00	0.86		★★★★
J&T Global Express Ltd 01519	None	Industrials		Chelsey Tam	HKD	6.60	0.86		★★★
CK Asset Holdings Ltd 01113	None	Real Estate		Jeff Zhang, CFA	HKD	37.00	0.87		★★★★
Gree Electric Appliances Inc of Zhuhai 000651	Narrow	Consumer Cyclical		Jeff Zhang, CFA	CNY	51.00	0.88		★★★★
China Resources Pharmaceutical Group 03320	Narrow	Healthcare		Yurou Zheng	HKD	5.80	0.89		★★★
Vipshop Holdings Ltd VIPS	None	Consumer Cyclical		Chelsey Tam	USD	18.20	0.90		★★★
nVent Electric PLC NVT	Narrow	Industrials		Brett Castelli	USD	62.00	0.90		★★★

Exhibit 3A 2024 Initiations (Continued)

Siegfried Holding AG SFZN	Narrow	Healthcare	Rachel Elfman	CHF	1020.00	0.90	★★★★
Fast Retailing Co Ltd 9983	Wide	Consumer Cyclical	Chelsey Tam	JPY	50700.00	0.91	★★★
TeamViewer SE TMV	None	Technology	Rob Hales, CFA	EUR	14.00	0.92	★★★
Yihai International Holdings Ltd 01579	None	Consumer Defensive	Jacky Tsang	HKD	15.60	0.92	★★★
Telstra Group Ltd TLS	Narrow	Communication Services	Brian Han	AUD	4.50	0.92	★★★
Inpex Corp 1605	None	Energy	Mark Taylor	JPY	2300.00	0.93	★★★★
Macquarie Technology Group Ltd MAQ	None	Technology	Brian Han	AUD	73.00	0.93	★★★
Regis Healthcare Ltd REG	None	Healthcare	Shane Ponraj, CFA	AUD	7.00	0.95	★★★
Deckers Outdoor Corp DECK	Narrow	Consumer Cyclical	David Swartz	USD	120.00	0.98	★★★
CyberArk Software Ltd CYBR	Narrow	Technology	Malik Ahmed Khan, CFA	USD	353.00	0.99	★★★
Sika AG SIKA	Narrow	Basic Materials	Matthew Donen, CFA	CHF	230.00	0.99	★★★
BridgeBio Pharma Inc BBIO	None	Healthcare	Rachel Elfman	USD	36.00	1.00	★★★
Terumo Corp 4543	Narrow	Healthcare	Yurou Zheng	JPY	2800.00	1.00	★★★
EQT AB EQT	Narrow	Financial Services	Johann Scholtz, CFA	SEK	315.00	1.01	★★★
Wix.com Ltd WIX	Narrow	Technology	Rob Hales, CFA	USD	166.00	1.02	★★★
Lifestyle Communities Ltd LIC	None	Real Estate	Esther Holloway	AUD	8.30	1.02	★★★
BeiGene Ltd 06160	None	Healthcare	Yurou Zheng	HKD	149.00	1.02	★★★
Hexagon AB HEXA B	None	Technology	Rob Hales, CFA	SEK	108.00	1.03	★★★
Murphy USA Inc MUSA	Narrow	Consumer Cyclical	Noah Rohr	USD	440.00	1.04	★★★
CVC Capital Partners PLC CVC	Narrow	Financial Services	Johann Scholtz, CFA	EUR	18.00	1.05	★★★
UL Solutions Inc ULS	Narrow	Industrials	Brett Castelli	USD	52.00	1.06	★★★
Guangzhou Kingmed Diagnostics Group 603882	None	Healthcare	Yurou Zheng	CNY	30.80	1.06	★★★
Zhejiang Supor Co Ltd 002032	Narrow	Consumer Cyclical	Jeff Zhang, CFA	CNY	51.00	1.07	★★★
Recruit Holdings Co Ltd 6098	Narrow	Communication Services	Roy Van Keulen	JPY	7700.00	1.07	★★★
Partners Group Holding AG PGHN	Narrow	Financial Services	Johann Scholtz, CFA	CHF	1240.00	1.07	★★★
Saab AB SAAB B	Wide	Industrials	Loredana Muharremi	SEK	371.00	1.07	★★★
Galderma Group AG GALD	Narrow	Healthcare	Diana Radu, CFA	CHF	86.00	1.09	★★
MGE Energy Inc MGEE	Narrow	Utilities	Andrew Bischof, CFA	USD	82.00	1.11	★★
Samsung BioLogics Co Ltd 207940	Narrow	Healthcare	Yurou Zheng	KRW	961000.00	1.12	★★
Industrial Bank Co Ltd 601166	None	Financial Services	Iris Tan, CFA	CNY	18.50	1.16	★★
Kingspan Group PLC KRX	None	Industrials	Grant Slade, CFA	EUR	66.00	1.19	★★
GE Vernova Inc GEV	None	Utilities	Brett Castelli	USD	265.00	1.20	★★
China Resources Building Materials Tech 01313	None	Basic Materials	Jeff Zhang, CFA	HKD	1.50	1.21	★★★★
Kongsberg Gruppen ASA KOG	Wide	Industrials	Loredana Muharremi	NOK	1270.00	1.25	★★
Arthur J. Gallagher & Co AJG	Narrow	Financial Services	Brett Horn, CFA	USD	267.00	1.26	★★
Capcom Co Ltd 9697	Narrow	Communication Services	Kazunori Ito	JPY	3000.00	1.28	★★
Constellation Software Inc CSU	Narrow	Technology	Eric Compton, CFA	CAD	3550.00	1.31	★★
ASICS Corp 7936	None	Consumer Cyclical	Ivan Su	JPY	2500.00	1.33	★★
Amer Sports Inc AS	Narrow	Consumer Cyclical	Ivan Su	USD	21.00	1.33	★★
Hapag-Lloyd AG HLAG	None	Industrials	Ben Slupecki, CFA	EUR	105.00	1.37	★★
Dollarama Inc DOL	Narrow	Consumer Defensive	Dan Su, CFA	CAD	106.00	1.40	★
Casey's General Stores Inc CASY	Narrow	Consumer Cyclical	Noah Rohr	USD	305.00	1.40	★
NEXTracker Inc NXT	None	Technology	Brett Castelli	USD	31.00	1.41	★★
Telix Pharmaceuticals Ltd TLX	None	Healthcare	Shane Ponraj, CFA	AUD	19.50	1.50	★★
EQT Corp EQT	None	Energy	Joshua Aguilar	USD	35.00	1.51	★★
Freeport-McMoRan Inc FCX	None	Basic Materials	Jon Mills, CFA	USD	25.00	1.66	★
BJ's Wholesale Club Holdings Inc BJ	None	Consumer Defensive	Noah Rohr	USD	65.00	1.70	★
Brunello Cucinelli SpA BC	Narrow	Consumer Cyclical	Jelena Sokolova, CFA	EUR	64.00	1.72	★
Guzman y Gomez Ltd GYG	None	Consumer Cyclical	Johannes Faul, CFA	AUD	16.00	2.10	★

Source: Morningstar, PitchBook. Data as of March 27, 2025.

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, in-depth competitive advantage analysis, and a variety of other analytical tools to augment this process. We think analyzing valuation through discounted cash flows presents a better lens for viewing cyclical companies, high-growth firms, businesses with finite lives (mines, for example), 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 short-term market-price movements), but we believe these negatives are mitigated by deep analysis and our long-term 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:

- ▶ our assessment of the firm's economic moat.
- ▶ our estimate of the stock's fair value.
- ▶ our uncertainty around that fair value estimate.
- ▶ the current market price.

This process ultimately culminates in our single-point star rating.

Economic Moat

The Morningstar Economic Moat Rating is a structural feature that Morningstar believes positions a firm to earn durable excess profits over a long period of time, with excess profits defined as returns on invested capital above our estimate of a firm's cost of capital. The economic moat rating is not an indicator of the investment performance of the investment highlighted in this report. Narrow-moat companies are those that Morningstar believes are more likely than not to achieve normalized excess returns for at least the next 10 years. Wide-moat companies are those that Morningstar believes will earn excess returns for 10 years, with excess returns more likely than not to remain for at least 20 years. Firms without a moat, including those that have a substantial threat of value destruction-related risks related to environmental, social, and governance; industry disruption; financial health; or other idiosyncratic issues, are more susceptible to competition. Morningstar has identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.

Fair Value Estimate

Each stock's fair value is estimated by using a proprietary discounted cash flow model, which assumes that the stock's value is equal to the total of the free cash flows of the company is expected to generate in the future, discounted back to the present at the rate commensurate with the riskiness of the cash flows. As with any DCF model, the ending value is highly sensitive to Morningstar's projections of future growth.

Fair Value Uncertainty

The Morningstar Uncertainty Rating represents the analysts' ability to bound the estimated value of the shares in a company around the fair value estimate, based on the characteristics of the business underlying the stock, including operating and financial leverage, sales sensitivity to the overall economy, product concentration, pricing power, exposure to material ESG risks, and other company-specific factors. Based on these factors, analysts classify the stock into one of several uncertainty levels: Low, Medium, High, Very High, or Extreme. 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.

Market Price

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

Morningstar Rating for Stocks

The Morningstar Rating for Stocks is a forward-looking, analyst-driven measure of a stock's current price relative to the analyst's estimate of what the shares are worth. Stock star ratings indicate whether a stock, in the equity analyst's educated opinion, is cheap, expensive, or fairly priced. To rate a stock, analysts estimate what they think it is worth (its "fair value"), using a detailed, long-term cash flow forecast for the company. A stock's star rating depends on whether its current market price is above or below the fair value estimate. Those stocks trading at large discounts to their fair values receive the highest ratings (4 or 5 stars). Stocks trading at large premiums to their fair values receive lower ratings (1 or 2 stars). A 3-star rating means the current stock price is close to the analyst's fair value estimate.

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Please note that investments in securities are subject to market and other risks, and there is no assurance or guarantee that the intended investment objectives will be achieved. Past performance of a security may or may not continue in the future and is no indication of future performance. A security investment's return and an investor's principal value will fluctuate so that, when redeemed, an investor's shares may be worth more or less than their original cost.

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