

# Echo Global Logistics, Inc. ECHO [XNAS] | ★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Stewardship	Morningstar Credit Rating	Industry
18.75 USD	16.00 USD	9.60 USD	24.80 USD	High	Narrow	Standard		Integrated Shipping & Logistics

We expect Echo to benefit from favorable trends in transportation and logistics outsourcing.

by Matthew Young, CFA  
Equity Analyst  
Analyst covering this company do not own its stock.

Pricing data through Aug 14, 2012.  
Rating Updated as of Aug 14, 2012.

Currency amounts expressed with "\$" are in U.S. dollars (USD) unless otherwise denoted.



## Thesis Aug. 01, 2012

Echo Global Logistics operates an attractive non-asset-based model in an expanding industry. Like most third-party logistics, or 3PL, providers with reasonable scale, the company's strong value proposition is driving shippers to outsource more of their transportation and logistics requirements. Because Echo does not own transportation equipment, we expect its low capital intensity to drive high returns on invested capital throughout the economic cycle. In fact, we forecast ROIC to approach 20% over the next five years--above that of most asset-based transportation providers. Moreover, Echo's large and growing network of shippers and carriers bestows a narrow economic moat that should help shield profitability from the many small truck brokers that operate throughout the fragmented domestic 3PL industry.

We estimate that the \$130 billion U.S. outsourced 3PL market (including domestic truck brokerage, international freight forwarding, dedicated contract carriage, and value-added warehousing) will expand at a multiple of GDP growth over the next five years. This follows impressive average annual growth of 10% between 1996 and 2009, according to data from Armstrong & Associates. The first year-over-year decline in logistics spending on record was in 2009 (down 16%), though the market recovered nicely in 2010 and 2011 (up 12% on average). A key industry growth driver is transportation and logistics outsourcing among shippers--3PLs are taking share from asset-based providers and motivating larger shippers to outsource logistics management. As the supply chain becomes more of a competitive differentiator (facilitating such benefits as shorter lead times, faster inventory turns, and mode optimization), we believe demand for outsourced 3PL services will persist. We estimate that 3PL providers still have a relatively small share of the market, capturing less than 10% of U.S. transportation and logistics spending. Furthermore, top-tier providers with scale are taking share

from smaller, less capable operations, as demand for sophisticated supply-chain technology and access to flexible capacity expands.

Echo provides a compelling value proposition to shippers and carriers. It leverages buying power, technological capabilities (transportation management software and market data), and relationships with asset-based capacity providers to enhance shippers' supply-chain-related execution. Small shippers enjoy lower transportation costs than they could generally obtain on their own directly with carriers. Larger shippers with internal logistics departments can outsource such functions, effectively converting fixed costs into variable costs and reducing the need for heavy IT investment. Large shippers also avoid the hassle of managing hundreds of carrier relationships across the fragmented carrier landscape; more than 95% of truckload carriers operate fewer than 20 trucks. Carriers are attracted to Echo because they gain access to a highly attractive source of freight opportunities.

Although Echo is not immune to cyclical downturns, its asset-light model helps mitigate margin pressure when freight conditions deteriorate; IT infrastructure makes up a significant portion of physical assets, as two thirds of capital expenditures relate to capitalized software development costs. This structure keeps fixed costs to a minimum (variable sales commissions represent 37% of operating costs), thereby reducing operating leverage relative to traditional asset-based transportation firms. As a young company, however, Echo still has room to reduce general and administrative costs per shipment as it scales its operating model. It should also gain some leverage over depreciation expenses. Furthermore, the cost of purchased transportation is highly variable because the firm buys capacity in the spot market. As a result, in periods of macroeconomic weakness when capacity loosens and carrier pricing falls, Echo can pass those declines to shippers on a lag, thereby expanding gross profit margins (gross revenue less cost of capacity).

On the flip side, when freight demand strengthens and/or carrier rates rise due to tight capacity, gross profit margin

# Echo Global Logistics, Inc. ECHO [XNAS] | ★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Stewardship	Morningstar Credit Rating	Industry
18.75 USD	16.00 USD	9.60 USD	24.80 USD	High	Narrow	Standard		Integrated Shipping & Logistics

Close Competitors	Currency (Mil)	Market Cap	TTM Sales	Oper Income	Net Income
CH Robinson Worldwide, Inc.	USD	8,917	10,771	710	445
Landstar System, Inc.	USD	2,288	2,786	202	125
Hub Group, Inc.	USD	1,185	3,033	104	64
Forward Air Corporation	USD	969	569	84	52

compression will temper earnings growth--a common theme throughout the industry during the first half of 2012.

We expect overall 3PL industry growth to remain healthy, and we think Echo's narrow moat will allow the firm to capitalize on this despite the influx of competition into the freight-brokerage space.

## Valuation, Growth and Profitability

Our fair value estimate is \$16 per share. For 2012, we expect gross revenue to expand approximately 28%. This represents a moderation from 2011 trends, mostly because of more challenging volume growth comparisons--as a relatively new firm, Echo has been growing rapidly off a small base.

Nonetheless, Echo remains active on the acquisition front, and we think the firm will continue to gain traction in the marketplace thanks to aggressive sales efforts. We model for slightly less net revenue growth, due to modest gross margin compression from rising carrier rates and changes in mix (i.e., greater proportion lower-margin truckload business). We forecast about 160 basis points of adjusted operating margin expansion (off of net revenue) as leverage over core general and administrative costs more than offsets growth investments, particularly salesforce expansion.

Over the next five years, we think the company can generate high-teens annual net revenue growth on average as it attracts new customers, increases penetration of existing accounts, and supplements internal growth with acquisitions of small freight brokers. Positive underlying secular trends in the third-party logistics industry, including logistics outsourcing and share gains from smaller brokers, should also provide a tailwind. As freight volume rises, we expect gradual operating margin expansion from lower general and

administrative costs per shipment. Echo's IT infrastructure should gradually require less incremental investment to support growth, as it is now more established and scalable. We forecast return on invested capital to reach 20% over the next five years. This compares with our 10% cost of capital assumption, reflecting our opinion that Echo maintains a narrow economic moat.

## Risk

Although Echo's variable-cost business model provides a buffer to profitability, the company is not immune to cyclical downturns in freight demand. When economic conditions become challenging, gross revenue trends reflect softer shipment volume from customers. In periods of accelerating freight demand, capacity typically firms and carrier rates rise. This dynamic has historically driven gross profit margin compression throughout the 3PL industry because non-asset-based providers, like Echo, generally pass through higher carrier rates to customers on a time lag.

Broader trucking industry issues such as driver availability, rising carrier safety regulation, and more stringent truck emission standards could lead to capacity shortages, especially when freight demand is robust. Such shortages could limit Echo's ability to secure capacity for customers by shrinking its carrier network. While Echo passes on fuel price increases to customers in the form of surcharges, the company may not fully recover these expenses given contractual limitations or implementation-related time delays.

Echo generates a significant portion of revenue (about 19% in 2011) from its 10 largest customers. Encouragingly, this represents a decline from 23% top-10 concentration in 2010, as the company has grown in size and diversified its customer base. Nonetheless, given Echo's ongoing focus on signing large enterprise-level clients (contractual accounts), we expect customer concentration to remain a slight risk factor. That is, the loss of a major client would adversely affect operating results.

# Echo Global Logistics, Inc. ECHO [XNAS] | ★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Stewardship	Morningstar Credit Rating	Industry
18.75 USD	16.00 USD	9.60 USD	24.80 USD	High	Narrow	Standard		Integrated Shipping & Logistics

## Bulls Say

- ▶ Supply chains are increasing in complexity, in part because of the globalization of trade and foreign sourcing trends. Shippers are also paying greater attention to supply-chain optimization as a competitive differentiator and source of potential cost savings. These factors are boosting demand for outsourced transportation and logistics solutions offered by sophisticated providers with scale, like Echo.
- ▶ Echo is taking market share from asset-based carriers, partly because of its ability to aggregate supply in the fragmented truckload market, which consists of thousands of small and midsize carriers. By outsourcing to Echo, shippers avoid the administrative burden and risk (including quality control and pricing) of managing numerous carrier relationships on their own. In addition, since the company does not own power equipment, it is free to provide optimal multimodal solutions that do not depend on maximizing utilization of company-owned assets.
- ▶ Echo's expanding network of shippers and carriers crafts a compelling value proposition. The firm aggregates its buying power to reduce shippers' transportation costs while providing carriers with a highly attractive source of freight opportunities. We also think the network produces relatively high barriers to entry, since it would be difficult for small competitors to replicate.

## Bears Say

- ▶ As a relatively new company, Echo has a limited operating history. While it has generated attractive top-line growth and decent profitability improvement since inception, its ability to execute and create shareholder wealth over the long run is unproved.
- ▶ High returns on invested capital are attracting competition to the 3PL industry. Examples include truck brokerage

operations of traditional asset-based providers and the integrators' (namely FedEx and UPS) rising focus on outsourced supply-chain-related services.

- ▶ While Echo's non-asset-based model reduces cyclicality, changes in carrier rates and the company's pricing power influence gross margins, particularly in terms of its ability to pass along rising carrier rates to shippers when capacity firms. The timing of customer contract repricing and amount of capacity the company procures in the spot market also affect gross margin performance.

## Financial Overview

**Financial Health:** Echo is in solid financial condition. The company's non-asset-based operating model supports a debt-free balance sheet (excluding the fair value of contingent earn-out payments associated with acquisitions) with sufficient cash. In 2010, the company generated material cash flow from operations for the first time (with improvement in 2011), and we expect free cash flow to average 1%-2% of gross revenue between 2012 and 2016.

## Company Overview

**Profile:** Founded in 2005, Echo Global Logistics is a non-asset-based third-party logistics provider, primarily focused on domestic truck brokerage (80% of gross revenue). It also offers small-parcel (7%) and intermodal and international air and ocean freight forwarding (13%) services. Key strategic initiatives include gaining market share from asset-based carriers, further penetrating existing accounts, and supplementing its sales capabilities through acquisitions of small freight brokers. Echo completed its initial public offering in October 2009.

**Management:** Chief executive Douglas Waggoner has been at the helm since late 2006. Before that, founders Eric Lefkofsky and Bradley Keywell shared responsibility for

# Echo Global Logistics, Inc. ECHO [XNAS] | ★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Stewardship	Morningstar Credit Rating	Industry
18.75 USD	16.00 USD	9.60 USD	24.80 USD	High	Narrow	Standard		Integrated Shipping & Logistics

overseeing Echo's day-to-day operations during the company's startup phase. In our view, members of Echo's senior management team possess sufficient career experience in transportation/logistics and information technology, which plays a crucial support role in Echo's 3PL service offerings. Waggoner has more than 30 years of experience in the transportation industry, including two years as CEO of USF Bestway. We like that most members of senior management hold an equity stake. However, as a whole, senior management, board members, and related entities influence slightly less than 40% of outstanding shares (as of early 2012), which reduces the sway of outside stakeholders and, hence, capital markets discipline.

# Echo Global Logistics, Inc. ECHO [XNAS] | ★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Stewardship	Morningstar Credit Rating	Industry
18.75 USD	16.00 USD	9.60 USD	24.80 USD	High	Narrow	Standard		Integrated Shipping & Logistics

## Analyst Notes

### Echo's Second-Quarter Results Slightly Below Our Forecast Jul. 27, 2012

Echo ECHO posted 22% gross revenue growth in the second quarter (to \$185 million) slightly below our forecast due to a contraction in average revenue per enterprise client. Relative to the same period last year, the revenue increase reflects an 18% rise in total volume (less-than-truckload volume was up 17%, while truckload activity expanded 19%) as well as 3% higher rates to customers on truckload business. LTL rates were down slightly because of lower average shipment weights. New account growth and acquisitions supported the increase in total shipments.

Sales from enterprise-level (contractual) customers grew 17% as Echo added 30 new accounts in the last year, including six during the quarter. We estimate average revenue per enterprise declined 2% year over year, compared to 4% growth in the first quarter and an 8% rise in fourth-quarter 2011. Revenue from transactional customers increased approximately 25%, aided by salesforce growth. At the end of the second quarter, Echo had 792 inside sales reps and agents, up from 747 last year. Decent productivity gains also contributed with average revenue per transactional sales rep increasing approximately 13% (up slightly from 10% in the first quarter).

Net revenue (gross revenue less purchased transportation) expanded 19%, slightly less than the increase in gross revenue due to 50 basis points of gross margin compression. A greater mix of truckload business and higher rates paid for capacity were the main drivers of this decline. Gross margin compression has been a common theme throughout the freight brokerage industry during the last few quarters as trucking industry capacity remains balanced, providing asset-based carriers with decent pricing power.

Excluding nonrecurring litigation costs and the impact of changes in contingent consideration related to acquisitions, operating profit as a percentage of net revenue improved 160 basis points to 17.7%. Lower relative commissions and leverage over depreciation and amortization costs drove most of the profitability gains. These factors more than offset incremental costs associated with salesforce expansion and other growth investments. We estimate Echo generated adjusted incremental operating margins of approximately 26%, ahead of the 22% posted in the first quarter.

### Highlights From Echo's Second Annual Investor Day Jun. 26, 2012

We recently attended Echo Global Logistics' second annual investor day, held at the firm's headquarters in Chicago. Management highlighted its key growth opportunities and strategic priorities, while reiterating its long-term financial targets. Altogether, there were no surprises and our view of the company largely remains the same. Echo is well run and we think the firm is positioned to capitalize on favorable industry trends--we expect the \$140 billion third-party logistics industry to expand at a multiple of GDP, supported by continued logistics outsourcing among shippers, as well as share gains from asset-based carriers and less sophisticated providers. Because Echo is a relatively new company, expanding both the size and productivity of its inside salesforce remains a strategic priority, and we anticipate additional leverage over general and administrative costs as the firm expands. Selective, tuck-in acquisitions should complement organic growth initiatives, while also boosting geographic sales coverage and multi-modal capabilities. That said, we still think the magnitude of long-term margin expansion remains a wild card given the firm's limited operating history. We are maintaining our fair value estimate.

# Echo Global Logistics, Inc. ECHO [XNAS] | ★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Stewardship	Morningstar Credit Rating	Industry
18.75 USD	16.00 USD	9.60 USD	24.80 USD	High	Narrow	Standard		Integrated Shipping & Logistics

## Analyst Notes (continued)

### **Echo Global Logistics Reports 1Q Results** Apr. 27, 2012

In the first quarter, Echo Global Logistics ECHO posted 30% gross revenue growth from the same period last year, about in line with our expectations. Higher revenue reflects a 22% rise in volume (less-than-truckload volume was up 22%, while truckload activity expanded 21%), as well as higher rates to customers on truckload business. New account growth and decent freight demand supported the increase in total shipments. Acquisitions also played a role. These trends were tempered by slightly lower rates (down 1%) on LTL business, driven by lower average shipment weights.

Sales from enterprise-level (contractual) customers grew 25%, as Echo added 31 new accounts over the past year, including 8 during the quarter. We estimate average revenue per enterprise account was up 4% from the same period last year, though the rate of improvement softened from 8% in the fourth quarter. Revenue from transactional customers rose about 33%, due in part to salesforce growth. At the end of the first quarter, Echo had about 750 inside sales reps and agents, up from 650 last year. Productivity gains also contributed, with average revenue per transactional sales rep increasing 10% (though this was down slightly from 14% growth in the fourth quarter).

Net revenue (gross revenue less purchased transportation) expanded 28%, slightly less than the increase in gross revenue due to 30 basis points of gross margin compression. A greater mix of truckload business and higher rates paid for capacity were the main drivers of the gross margin decline--trucking industry capacity remains balanced, providing asset-based carriers with decent pricing power.

Excluding the impact of changes in contingent consideration related to acquisitions, operating profit as a percentage of net revenue improved 180 basis points to 15.5%. Lower

relative commissions (from a decline in revenue contribution from agents, who carry a higher commission rate), as well as leverage over depreciation and amortization costs, drove most of the profitability gains. These factors more than offset incremental costs associated with salesforce expansion and other investments for growth. We estimate Echo generated incremental operating margin of approximately 22%, roughly in line with that of the fourth quarter.

# Echo Global Logistics, Inc. ECHO

**Sales USD Mil** 676 **Mkt Cap USD Mil** 422 **Industry** Integrated Shipping & Logistics **Sector** Industrials

Founded in 2005, Echo Global Logistics is a non-asset-based third-party logistics provider, primarily focused on domestic truck brokerage (80% of gross revenue). It also offers small-parcel (7%) and intermodal and international air and ocean freight forwarding (13%) services. Key strategic initiatives include gaining market share from asset-based carriers, further penetrating existing accounts, and supplementing its sales capabilities through acquisitions of small freight brokers. Echo completed its initial public offering in October 2009.

600 West Chicago Avenue Suite 725  
Chicago, IL 60654  
Phone: 1 800 354-7993 Website: <http://www.echo.com>

**Morningstar Rating** — **Last Price** 18.44 **Fair Value** — **Uncertainty** — **Economic Moat™** — **Stewardship** —  
per share prices in USD



Growth Rates Compound Annual					
Grade: B	1 Yr	3 Yr	5 Yr	10 Yr	
Revenue %	41.4	43.8	78.6	—	
Operating Income %	40.7	56.4	—	—	
Earnings/Share %	39.5	55.9	—	—	
Dividends %	—	—	—	—	
Book Value/Share %	13.1	—	—	—	
Stock Total Return %	32.6	—	—	—	
+/- Industry	21.6	—	—	—	
+/- Market	7.2	—	—	—	

Profitability Analysis				
Grade: C	Current	5 Yr Avg	Ind	Mkt
Return on Equity %	11.3	—	24.2	22.8
Return on Assets %	7.0	5.0	9.5	9.3
Fixed Asset Turns	61.3	41.3	3.4	7.7
Inventory Turns	—	—	28.6	17.0
Revenue/Employee USD K	740.0	551.0*	—	1055.7
Gross Margin %	19.2	20.6	61.0	39.7
Operating Margin %	3.2	2.8	10.2	16.6
Net Margin %	2.0	1.5	5.7	11.1
Free Cash Flow/Rev %	1.7	—	6.2	0.1
R&D/Rev %	—	—	—	9.5

Financial Position		
Grade: B	12-11 USD Mil	06-12 USD Mil
Cash	47	47
Inventories	—	—
Receivables	90	101
Current Assets	142	152
Fixed Assets	11	12
Intangibles	48	48
Total Assets	201	212
Payables	65	67
Short-Term Debt	—	—
Current Liabilities	72	73
Long-Term Debt	8	7
Total Liabilities	81	83
Total Equity	119	129

Valuation Analysis				
	Current	5 Yr Avg	Ind	Mkt
Price/Earnings	30.7	—	17.3	—
Forward P/E	20.3	—	—	13.2
Price/Cash Flow	22.2	—	8.9	—
Price/Free Cash Flow	36.5	—	16.8	—
Dividend Yield %	—	—	2.1	2.0
Price/Book	3.3	—	4.3	—
Price/Sales	0.6	—	1.0	—
PEG Ratio	0.6	—	—	0.3

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	YTD	Stock Performance
—	—	—	—	—	—	—	—	-5.1	34.1	14.2	Total Return %
—	—	—	—	—	—	—	—	-17.9	34.1	2.4	+/- Market
—	—	—	—	—	—	—	—	-33.2	38.1	11.7	+/- Industry
—	—	—	—	—	—	—	—	—	—	0.0	Dividend Yield %
—	—	—	—	—	—	—	276	265	358	422	Market Cap USD Mil

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TTM	Financials
—	—	—	—	33	95	203	260	426	603	676	Revenue USD Mil
—	—	—	—	16.5	21.9	21.2	21.4	19.0	19.4	19.2	Gross Margin %
—	—	—	—	0	3	5	6	13	19	22	Oper Income USD Mil
—	—	—	—	-1.4	2.8	2.4	2.3	3.2	3.1	3.2	Operating Margin %
—	—	—	—	-1	1	2	4	8	12	14	Net Income USD Mil
—	—	—	—	-0.04	0.03	0.14	0.29	0.38	0.53	0.60	Earnings Per Share USD
—	—	—	—	—	—	—	—	—	—	—	Dividends USD
—	—	—	—	22	25	13	15	22	23	23	Shares Mil
—	—	—	—	—	—	—	4.31	4.76	5.39	5.64	Book Value Per Share USD
—	—	—	—	2	0	2	-6	9	16	19	Oper Cash Flow USD Mil
—	—	—	—	-2	-4	-5	-4	-6	-6	-7	Cap Spending USD Mil
—	—	—	—	1	-4	-3	-10	2	9	11	Free Cash Flow USD Mil

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TTM	Profitability
—	—	—	—	-5.0	3.0	5.0	4.9	5.7	6.7	7.0	Return on Assets %
—	—	—	—	—	—	—	9.5	8.5	10.7	11.3	Return on Equity %
—	—	—	—	-2.6	0.7	0.9	1.7	2.0	2.0	2.0	Net Margin %
—	—	—	—	1.95	4.28	5.52	2.91	2.90	3.33	3.45	Asset Turnover
—	—	—	—	—	—	—	1.4	1.5	1.7	1.6	Financial Leverage

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	06-12	Financial Health
—	—	—	—	8	5	3	66	64	70	79	Working Capital USD Mil
—	—	—	—	—	—	—	5	7	8	7	Long-Term Debt USD Mil
—	—	—	—	-6	-3	-1	94	105	119	129	Total Equity USD Mil
—	—	—	—	—	—	—	0.06	0.07	0.06	0.06	Debt/Equity

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TTM	Valuation
—	—	—	—	—	—	—	43.7	31.6	30.5	30.7	Price/Earnings
—	—	—	—	—	—	—	—	—	1.7	—	P/E vs. Market
—	—	—	—	—	—	—	0.7	0.6	0.6	0.6	Price/Sales
—	—	—	—	—	—	—	3.0	2.5	3.0	3.3	Price/Book
—	—	—	—	—	—	—	—	31.0	23.1	22.2	Price/Cash Flow

Quarterly Results					
Revenue USD Mil	Sep 11	Dec 11	Mar 12	Jun 12	
Most Recent Period	159.0	162.9	168.6	185.2	
Prior Year Period	113.5	113.8	129.4	151.5	
Rev Growth %	Sep 11	Dec 11	Mar 12	Jun 12	
Most Recent Period	40.0	43.1	30.2	22.3	
Prior Year Period	61.8	42.2	45.3	37.9	
Earnings Per Share USD	Sep 11	Dec 11	Mar 12	Jun 12	
Most Recent Period	0.15	0.16	0.15	0.15	
Prior Year Period	0.12	0.12	0.10	0.13	

Industry Peers by Market Cap				
	Mkt Cap USD Mil	Rev USD Mil	P/E	ROE%
Echo Global Logistic	422	676	30.7	11.3
CH Robinson Worldwid	8818	10771	20.0	34.6
Landstar System, Inc	2269	2786	18.3	39.8

Major Fund Holders		% of shares
		—
		—
		—

\*3Yr Avg data is displayed in place of 5Yr Avg

TTM data based on rolling quarterly data if available; otherwise most recent annual data shown.

## Morningstar's Approach to Rating Stocks

### Our Key Investing Concepts

- ▶ Economic Moat™ Rating
- ▶ Discounted Cash Flow
- ▶ Discount Rate
- ▶ Fair Value
- ▶ Uncertainty
- ▶ Margin of Safety
- ▶ Consider Buying/Consider Selling
- ▶ Stewardship Grades

At Morningstar, we evaluate stocks as pieces of a business, not as pieces of paper. We think that purchasing shares of superior businesses at discounts to their intrinsic value and allowing them to compound their value over long periods of time is the surest way to create wealth in the stock market.

We rate stocks 1 through 5 stars, with 5 the best and 1 the worst. Our star rating is based on our analyst's estimate of how much a company's business is worth per share. Our analysts arrive at this "fair value estimate" by forecasting how much excess cash--or "free cash flow"--the firm will generate in the future, and then adjusting the total for timing and risk. Cash generated next year is worth more than cash generated several years down the road, and cash from a stable and consistently profitable business is worth more than cash from a cyclical or unsteady business.

Stocks trading at meaningful discounts to our fair value estimates will receive high star ratings. For high-quality businesses, we require a smaller discount than for mediocre ones, for a simple reason: We have more confidence in our cash-flow forecasts for strong companies, and thus in our value estimates. If a stock's market price is significantly above our fair value estimate, it will receive a low star rating, no matter how wonderful we think the business is. Even the best company is a bad deal if an investor overpays for its shares.

Our fair value estimates don't change very often, but market prices do. So, a stock may gain or lose stars based

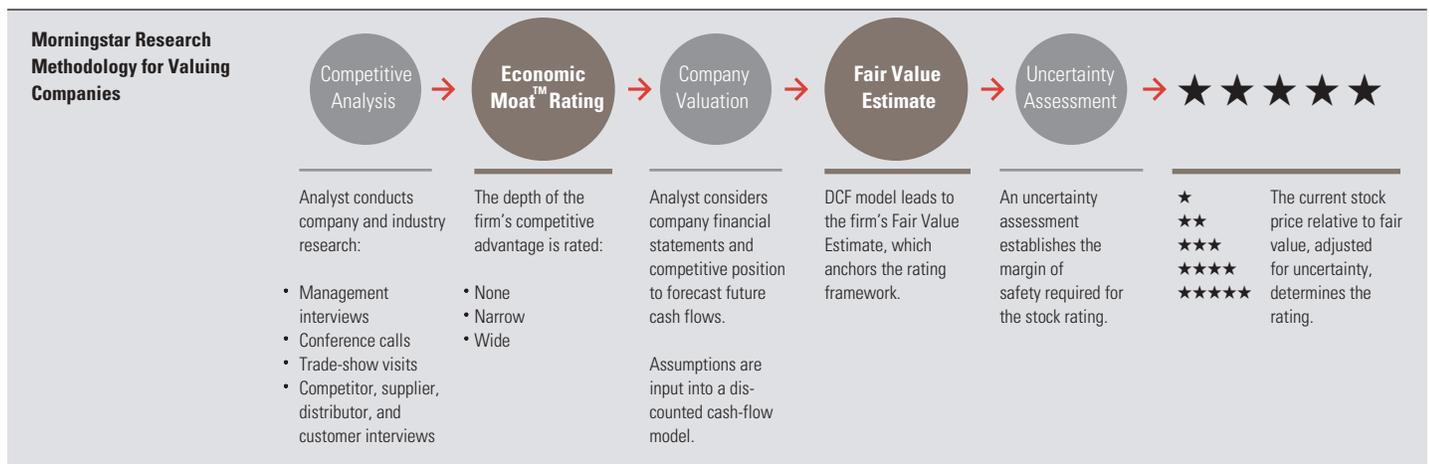
just on movement in the share price. If we think a stock's fair value is \$50, and the shares decline to \$40 without much change in the value of the business, the star rating will go up. Our estimate of what the business is worth hasn't changed, but the shares are more attractive as an investment at \$40 than they were at \$50.

Because we focus on the long-term value of businesses, rather than short-term movements in stock prices, at times we may appear out of step with the overall stock market. When stocks are high, relatively few will receive our highest rating of 5 stars. But when the market tumbles, many more will likely garner 5 stars. Although you might expect to see more 5-star stocks as the market rises, we find assets more attractive when they're cheap.

We calculate our star ratings nightly after the markets close, and issue them the following business day, which is why the rating date on our reports will always be the previous business day. We update the text of our reports as new information becomes available, usually about once or twice per quarter. That is why you'll see two dates on every Morningstar stock report. Of course, we monitor market events and all of our stocks every business day, so our ratings always reflect our analyst's current opinion.

### Economic Moat™ Rating

The Economic Moat™ Rating is our assessment of a firm's ability to earn returns consistently above its cost of capital in the future, usually by virtue of some competitive advantage. Competition tends to drive down such



## Morningstar's Approach to Rating Stocks (continued)

---

economic profits, but companies that can earn them for an extended time by creating a competitive advantage possess an Economic Moat. We see these companies as superior investments.

---

### Discounted Cash Flow

This is a method for valuing companies that involves projecting the amount of cash a business will generate in the future, subtracting the amount of cash that the company will need to reinvest in its business, and using the result to calculate the worth of the firm. We use this technique to value nearly all of the companies we cover.

---

### Discount Rate

We use this number to adjust the value of our forecasted cash flows for the risk that they may not materialize. For a profitable company in a steady line of business, we'll use a lower discount rate, also known as "cost of capital," than for a firm in a cyclical business with fierce competition, since there's less risk clouding the firm's future.

---

### Fair Value

This is the output of our discounted cash-flow valuation models, and is our per-share estimate of a company's intrinsic worth. We adjust our fair values for off-balance sheet liabilities or assets that a firm might have—for example, we deduct from a company's fair value if it has issued a lot of stock options or has an under-funded pension plan. Our fair value estimate differs from a "target price" in two ways. First, it's an estimate of what the business is worth, whereas a price target typically reflects what other investors may pay for the stock. Second, it's a long-term estimate, whereas price targets generally focus on the next two to 12 months.

---

### Uncertainty

To generate the Morningstar Uncertainty Rating, analysts consider factors such as sales predictability, operating leverage, and financial leverage. Analysts then classify their ability to bound the fair value estimate for the stock into one of several uncertainty levels: Low, Medium, High,

Very High, or Extreme. The greater the level of uncertainty, the greater the discount to fair value required before a stock can earn 5 stars, and the greater the premium to fair value before a stock earns a 1-star rating.

---

### Margin of Safety

This is the discount to fair value we would require before recommending a stock. We think it's always prudent to buy stocks for less than they're worth. The margin of safety is like an insurance policy that protects investors from bad news or overly optimistic fair value estimates. We require larger margins of safety for less predictable stocks, and smaller margins of safety for more predictable stocks.

---

### Consider Buying/Consider Selling

The consider buying price is the price at which a stock would be rated 5 stars, and thus the point at which we would consider the stock an extremely attractive purchase. Conversely, consider selling is the price at which a stock would have a 1 star rating, at which point we'd consider the stock overvalued, with low expected returns relative to its risk.

---

### Stewardship Grades

Our corporate Stewardship Rating represents our assessment of management's stewardship of shareholder capital, with particular emphasis on capital allocation decisions. Analysts consider companies' investment strategy and valuation, financial leverage, dividend and share buyback policies, execution, compensation, related party transactions, and accounting practices. Corporate governance practices are only considered if they've had a demonstrated impact on shareholder value. Analysts assign one of three ratings: "Exemplary," "Standard," and "Poor." Analysts judge stewardship from an equity holder's perspective. Ratings are determined on an absolute basis. Most companies will receive a Standard rating, and this is the default rating in the absence of evidence that managers have made exceptionally strong or poor capital allocation decisions.