

**Last Price** Moat Trend™ Fair Value **Consider Buy Consider Sell** Uncertainty Economic Moat™ Stewardship **Industry Group** 27.31 USD 37.00 USD 25.90 USD 49 95 usp Medium Wide Stable Standard Transportation & Logistics

Long run, we expect CSX to continue to improve its operating ratio, despite secular coal weakness.

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

Research as of 27 Sep 2015 Estimates as of 26 Sep 2015 Pricing data through 02 Oct 2015 Rating updated as of 02 Oct 2015

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

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#### Investment Thesis 27 Apr 2015

CSX's margin gains of the past decade are nothing short of astounding. The firm lagged its peers after the rail renaissance began in 2004, but surprisingly strong profitability during the recession marked the end of its perceived second-class status. Historically, CSX's closest comparative peer, Norfolk Southern, earned at least 5 percentage points better annual margin, but CSX achieved record improvements in operating ratio (operating expenses/revenue) during 2009-12 and more than closed the performance gap. The Eastern railroad started its margin improvement trajectory during the early days of the modern railroad renaissance and advanced its OR to around 71% (29% EBIT margin) during the past five years from more than 90% in 2003.

Management's long-run mid-60s OR target seems attainable to us, for we believe much-improved profitability is here to stay at CSX. However, given CSX's coal-rich mix (31.6% of consolidated 2011 revenue, down to 23% in 2014), the rail will continue to be hard hit by plunging coal demand during the next several years; we think CSX can size its network to match demand. Case in point: While coal volume declined a steep 16% in 2012, CSX slightly bettered its prior-year OR. Autos and intermodal growth, plus continued OR improvement, should help salvage earnings despite coal losses.

CSX's competitive advantages are inseparable from the geography of its track. Its Eastern U.S. network stretches a bit farther in latitude than that of Norfolk Southern, reaching into Florida and New England. The location of all its assets enables CSX to attract a diverse mix of commodities. CSX made meteoric progress in its operations during the past decade, improving safety, shortening terminal dwell time, and increasing on-time arrivals. In almost every measure of operating performance, CSX moved the needle significantly. Along with better-run operations, the company materially improved its pricing, expanding consolidated yield at a 6% compound annual rate since 2004. Given this progress, there's now less room for improvement, but we expect pricing power to persevere in excess of 2%-3% annual railroad cost inflation.

Vital Statistics				
Market Cap (USD Mil)				26,866
52-Week High (USD)				37.99
52-Week Low (USD)				24.47
52-Week Total Return %				-10.7
YTD Total Return %				-23.2
Last Fiscal Year End			31 E	ec 2014
5-Yr Forward Revenue CAGR %				1.1
5-Yr Forward EPS CAGR %				7.8
Price/Fair Value				0.74
Valuation Summary and Fore	casts			
Fiscal Year:	2013	2014	2015(E)	2016(E)

Valuation Summary and Forecasts										
Fis	cal Year:	2013	2014	2015(E)	2016(E)					
Price/Earnings		15.7	18.9	13.7	12.2					
EV/EBITDA		8.2	9.3	7.4	7.1					
EV/EBIT		10.8	12.3	9.7	9.1					
Free Cash Flow Yield %		3.3	2.5	5.1	6.1					
Dividend Yield %		2.1	1.8	2.5	2.7					

Financial Summary	Financial Summary and Forecasts (USD Mil)									
	Fiscal Year:	2013	2014	2015(E)	2016(E)					
Revenue		12,026	12,669	11,724	11,949					
Revenue YoY %		2.2	5.4	-7.5	1.9					
EBIT		3,473	3,613	3,693	3,943					
EBIT YoY %		0.3	4.0	2.2	6.8					
Net Income, Adjusted		1,864	1,927	1,947	2,103					
Net Income YoY %		0.1	3.4	1.1	8.0					
Diluted EPS		1.83	1.92	2.00	2.23					
Diluted EPS YoY %		2.1	5.1	4.2	11.1					
Free Cash Flow		1,437	1,540	1,743	2,031					
Free Cash Flow YoY $\%$		41.1	7.2	13.2	16.6					

Historical/forecast data sources are Morningstar Estimates and may reflect adjustments.

#### **Profile**

CSX is a \$13 billion railroad operating in the Eastern United States. On its 20,800 miles of track, CSX hauls shipments of coal products (23% of consolidated revenue), chemicals (17%), intermodal traffic (14%), and a diverse mix of other merchandise.



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## Morningstar Analysis

### Valuation, Growth and Profitability 27 Sep 2015

Our fair value estimate for CSX is \$37 per share. Our expectation is for a 7.5% top-line contraction in 2015. We project after 2015 intermodal volume will grow at 3% per annum, most other businesses will grow at about 1%, and coal will decline each year as a result of weak export and utility demand. We model coal carloads declining a steep 13% in 2015, an additional 10% in 2015, then slower thereafter. Despite further coal contraction, we expect population growth, auto recovery, homebuilding recovery, and intermodal gains from the highway will fuel modest volume improvement. While in the near term, we expect declining fuel surcharge will present a headwind to average revenue per unit, we model most rates to improve 2%-3% annually long run--slightly in excess of rail inflation. In coal, however, we model a slight decline in 2015 rates as we believe export coal will need to stay priced to move in a demanding international market and facing cheap natural gas as a powerful competitor in power generation, and we believe the competing mode of trucking can constrain intermodal yield changes to 0%-2% per year.

We forecast an operating ratio of 68.5% in 2015, as the rail continues to deftly adjust to plunging coal demand. The 66.8% record OR in the second quarter puts CSX on track for this, albeit with the help of low fuel expense. By 2017, we think the rail can achieve a 65% OR. In April 2013, management and the board revised the prior OR target of 65% by 2015, which was set before the firm felt the full brunt of coal-to-gas utility switching; the current target is a mid-60s OR for the long term.

We anticipate no degradation in the rail's ability to control most of its costs in the long run (even fuel is mostly covered by surcharges). Our valuation is constrained by the heavy cash demanded for reinvestment in the railroad: We project that about 18% of revenue will be spent annually on capital investment, including the unfunded but mandated positive train control implementation during the next few years.

### **Scenario Analysis**

We model three scenarios in our discounted cash flow valuation model. In each scenario, we vary volume and rate growth in various commodity segments, then we forecast expenses as a percentage of total revenue. The three scenarios share common tax rates, capital expenditures as a proportion of revenue, and share count. In each scenario, we assume CSX can cover shocks to diesel pricing via effective fuel surcharges. Naturally, zero-margin surcharges dilute operating ratio to some extent--a small price to pay on paper for recovery of this volatile, dangerous commodity cost. For example, fuel increased from just 7% of revenue in 2002 to more than 16% of revenue in 2008.

Our bear-case scenario decreases our fair value estimate by about 25%. Here, after 2015 we assume flat carloads in merchandise and only 1% annual growth in both intermodal and autos. For coal tonnage we pessimistically model 10% annual declines in domestic coal and a steep 20% drop in export coal in 2015 followed by no recovery. Our bear-case pricing is 3% annual revenue per car increases, except for a 4% decline in 2015 coal and just 2% annual increases in intermodal (truck competition suppresses increases). In this case, we project that CSX will reach a 69% operating ratio by 2016, about 200 basis points better than where it has stagnated for five years.

Our bull case yields a fair value estimate about 20% greater than the base case by projecting 4% price increases annually (3% in intermodal), but we model CSX's operating ratio to continue improving to 63% by 2017 (mostly by paying less labor and fringe expense as a percentage of revenue). We model domestic coal to decline at a slower rate (3% instead of base case 5%). This margin performance is unproved for CSX, but technology may drive down operating ratios; new GE route-learning locomotive guidance software may reduce fuel expenses, and wider use of distributed power may facilitate building longer trains, which reduces



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train starts.

### **Economic Moat**

CSX's wide economic moat is based on cost advantages and efficient scale. While barges, ships, aircraft, and trucks also haul freight, railroads are the low-cost option by far where no waterway connects the origin and destination, especially for freight with low value per unit weight. Moreover, railroads claim quadruple the fuel efficiency of trucking per ton-mile of freight and through greater railcar capacity and train length make more effective use of manpower despite the need for train yard personnel. Even for goods that can be shipped by truck, we estimate Eastern railroads charge 10%-20% less than truckers to transport containers on the same lane.

The network of track and assets Class I rails have in place is impossible to replicate. CSX spans the densely populated Eastern U.S., capturing about half of the rail volume in the region. Its rights of way and installed track form a nearly impenetrable barrier to entry. We think there will be no new railroads built, although line extensions by existing railroads (including restoring abandoned lines) may take place in

select areas as the economy recovers. Efficient scale followed industry consolidation escalated by the 1980 Staggers Act that permitted extensive rail line sales, abandonment, and combination. North America had more than 40 Class I rails in 1980; today, there are just eight (a Class I generated at least \$452.7 million of 2012 operating revenue; six are publicly traded). Staggers also allowed private contracts and rate setting. On all but the busiest lanes (like Wyoming's coal-rich Powder River Basin), generally a single railroad serves an end-of-the-line shipper, and only two railroads operate in most regions in North America. Indeed, we opine that absent government intervention, the rational number of competitors on the continent would be two, via additional consolidation, since in most regions customers already have only two capable providers. The steep barrier to entry formed by the need to obtain contiguous rights of way on which to lay continuously welded steel rail spanning one third of a huge continent fends off would-be entrants. Railroads may build spurs or restore abandoned lines, but we anticipate that because of massive barriers to entry, no new main lines will be built.

Barriers to entry are powerful for railroads, but running a railroad requires massive reinvestment. CSX's still-sizable annual capital expenditures typically amount to 16%-20% of revenue. While the rails don't outearn their cost of capital by much, our wide moat rating stems from our confidence that rails will leverage cost and efficient scale competitive advantages to generate positive economic profits for the benefit of share owners with near certainty 10 years from now, and more likely than not 20 years from now; by our methodology, this defines a wide economic moat.

### **Moat Trend**

We consider CSX's moat to be stable. In fact, we believe the economic moats of all six Class I railroads are stable. We believe the high-revenue North American railroads will continue improving operations and raising rates, as they have since around 2004. By now these cost advantage



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enhancements are routine industry practices (not changes in competitive advantage), thus the stable moat rating.

We think the operating measures will converge at the Class I railroads during the next five years or so, with all rails performing at a level slightly less profitably than Canadian National. All Class I railroads have made astounding progress in asset utilization and operating efficiency since about 2004, increasing their attractiveness relative to other modes of transport. Rails continue on the right trajectory, particularly among those that had more room for improvement.

We credit pricing power and stability at the top of its operations organization for CSX's tremendous improvements in profitability during the past few years. We believe the minimum distance for an intermodal route to become economically viable will shorten during the coming decade, as rail becomes even more predictable and reliable. This will benefit Eastern rails, since Eastern haul lengths are much shorter than those in the West. As fuel prices rise and environmental issues persist, railroads are a ready solution to public concerns, and CSX targets taking even shorter-haul intermodal volume from trucking.



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## Bulls Say/Bears Say

#### **Bulls Say**

- CSX has improved operations significantly during the past few years. On-time originations and arrivals, safety, dwell time in terminals, and velocity have steadily increased during recent quarters.
- ► CSX is doing what it takes to improve its operating ratio. Starting with trimming more than one fifth of its management in 2003, the firm has driven down labor expense to about 26% of revenue from 39% in 2002.
- Compared with trucking, shipping by rail is less expensive for long distances, is 4 times more fuelefficient per ton-mile, and does not contribute to freeway congestion.

#### **Bears Say**

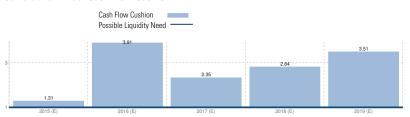
- Although coal and grain historically have been normally relatively robust cargo, 2009 demonstrated that railroads cannot escape the broader economy's cyclicality.
- Coal never recovered from the recession, and demand continues to slide due to cheap natural gas substitution and reduced international steelmaking. Uncertainty surrounding the magnitude of coal volume declines has pressured CSX's stock for several guarters.
- ► Unlike trucking firms, railroads must purchase and maintain their roads. We project high capital expenditures will consume about 18% of CSX's annual revenue.



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Five Year Adjusted Cash Flow Forecast (USD Mil)					
	2015(E)	2016(E)	2017(E)	2018(E)	2019(E)
Cash and Equivalents (beginning of period)	961	1,528	1,828	2,495	3,160
Adjusted Available Cash Flow	233	1,339	1,531	1,608	1,673
Total Cash Available before Debt Service	1,194	2,867	3,358	4,103	4,833
Principal Payments	-228	-21	-631	-619	-518
Interest Payments	-578	-605	-690	-720	-750
Other Cash Obligations and Commitments	-108	-107	-109	-108	-108
Total Cash Obligations and Commitments	-914	- <i>733</i>	-1,430	-1,447	-1,376

#### **Cumulative Annual Cash Flow Cushion**



#### **Adjusted Cash Flow Summary**

		/0 UI	
	USD Millions	Commitments	
Beginning Cash Balance	961	16.3	
Sum of 5-Year Adjusted Free Cash Flow	6,384	108.2	
Sum of Cash and 5-Year Cash Generation	7,345	124.5	
Revolver Availability	1,000	17.0	
Asset Adjusted Borrowings (Repayment)	_	_	
Sum of Cash, 5-Year Cash Generation, Revolver and Adjustments	8,345	141.5	
Sum of 5-Year Cash Commitments	-5,899	_	

#### **Financial Health**

CSX's balance sheet is in good shape. The firm had \$1,118 million of cash and short-term investments compared with \$10,125 billion of debt as of June 30, 2015. The firm operates with manageable leverage, with total debt/EBITDA leverage of 2.1 times as of June 30, 2015, although we note that rent- and pension-adjusted leverage increases to 2.5 times. CSX employs a fairly straightforward capital structure, composed of mostly long-term unsecured debt, to fund its sizable capital investments, which we forecast will average 18% of sales annually. The firm also utilizes a small amount of secured debt to finance equipment. CSX maintains a \$1 billion revolver and employs a \$250 million receivables securitization facility to augment its near-term cash needs. Morningstar's issuer credit rating for CSX is BBB+.

### **Enterprise Risk**

CSX is exposed to the health of the U.S. economy and to both domestic utility and international metallurgical and steam coal demand. Low natural gas prices and increased Environmental Protection Agency regulations have put a material portion of the domestic utility coal franchise at risk of disappearing, and export coal demand is lower than in past years as a result of less steelmaking in Asia. The rail is relying on its intermodal franchise to expand volume. The firm has improved rapidly, and we no longer believe it has greater operating risk than other railroads. Outside of normal operations, CSX has assets in locations susceptible to hurricane damage, but natural disaster risk is inevitable in railroading, given its outdoor nature and expanse. Threat of increased regulation ebbed somewhat because the 2010 election resulted in a Republican-controlled House, but regulation can constrain rail profitability in more modes than simply price controls. For example, the Federal Railroad Administration estimates the 2008 legal mandate to install positive train control systems (by 2015) will cost the Class I railroads north of \$13 billion to implement and maintain



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for the next 20 years. The Association of American Railroads claims PTC will prevent few accidents and provide little economic return to shareholders. We consider legislators lacking long-term or broad national freight transportation perspective to be one of the greatest risks railroads face.

**Management Activity** 



# CSX Corp CSX (NYSE) | ★★★★

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## Management & Ownership

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Name	Position	Shares Held	Report Date*	InsiderActivity
MICHAEL J. WARD	CEO/Chairman of the Board/ Director,Director	571,516	07 May 2015	_
OSCAR MUNOZ	Director	474,801	08 Sep 2015	_
CINDY M. SANBORN	COO, Subsidiary/Executive VP, Subsidiary	101,053	07 May 2015	_
LISA A. MANCINI	Chief Administrative Officer/Senior VP	95,271	07 May 2015	_
MR. FREDRIK J. ELIASSON	I Chief Marketing Officer/Executive VP/Other Executive Officer	89,834	07 May 2015	_
CLARENCE W. GOODEN	President	89,663	07 May 2015	_
ELLEN M. FITZSIMMONS	Executive VP, Divisional/General	63,910	01 Jun 2015	_

<sup>\*</sup>Represents the date on which the owner's name, position, and common shares held were reported by the holder or issuer.

Counsel/Secretary

Fund Ownership				
Top Owners	% of Shares Held	% of Fund Assets	Change (k)	Portfolio Date
VA CollegeAmerica Invmt Co of America	_	1.13	_	30 Jun 2015
VA CollegeAmerica Growth Fund of America	_	0.50		30 Jun 2015
Vanguard Wellington™	_	0.61	_	30 Jun 2015
Vanguard Total Stock Mkt ldx	_	0.13	-41	31 Aug 2015
Vanguard Five Hundred Index Fund	_	0.15	140	31 Aug 2015
Concentrated Holders				
Deep Value ETF	_	7.44	11	22 Sep 2015
BT Lazard Global Listed Infrastructure	_	6.66	320	31 Aug 2015
Standard Life Global Infrastructure Fund (Lazard)	_	5.93	130	30 Jun 2015
JPM World Railway Related Eq	_	5.83	28	14 Jan 2015
Brickburn Income Growth Class	_	5.37	_	31 Aug 2015
Institutional Transactions				
	% of Shares	% of Fund	Shares Bought/	
Top 5 Buyers Goldman, Sachs & Co.	Held	Assets 0.18	Sold (k) 9,737	Portfolio Date 30 Jun 2015
Citadel Advisors Llc		0.10	5,548	30 Jun 2015
Credit Suisse First Boston (CSFB)	_	0.23	4,581	30 Jun 2015
Point72 Asset Management, L.P.	_	1.29	3.528	30 Jun 2015
5				
Morgan Stanley & Co Inc	_	0.18	3,394	30 Jun 2015
·	_	0.18	3,394	30 Jun 2015
Top 5 Sellers	_	0.18	.,	30 Jun 2015 30 Jun 2015
·	_ _ _		3,394 -3,327 -3,070	
Top 5 Sellers  J.P. Morgan Investment Management Inc.	_ _ _ _	0.05	-3,327	30 Jun 2015
Top 5 Sellers  J.P. Morgan Investment Management Inc.  Deutsche Inv Mgmt Americas Inc	- - - -	0.05 0.44	-3,327 -3,070	30 Jun 2015 30 Jun 2015
Top 5 Sellers  J.P. Morgan Investment Management Inc.  Deutsche Inv Mgmt Americas Inc  Deutsche Asset Mgmt Invst Gesenschaft	_ _ _ _ _	0.05 0.44 0.49	-3,327 -3,070 -2,813	30 Jun 2015 30 Jun 2015 30 Jun 2015

### Management 08 Sep 2015

Since Michael Ward took the reins as CEO in January 2003, CSX has generated truly impressive results. This success was achieved during a period when all railroads realized excellent performance, but we believe Ward has accomplished a lot, particularly in driving operating ratio improvement. Railroads pay executive suites well, and CSX is no exception. Ward's \$10 million in total 2014 compensation consisted of \$1.2 million in salary, \$7.0 million in stock awards, and \$1.8 million in nonequity incentive plan compensation.

Solid leadership in operations has been instrumental in CSX's success. Before the 2004 arrival of Tony Ingram, CSX had 10 COOs in the prior decade. Ingram retired in 2009; before his stability, each new COO's changing initiatives and operating philosophies made CSX's failure to run as well as other railroads no surprise. CSX paid its most recent full-year COO Oscar Munoz \$3.8 million in total during 2014, and beyond Ward and Munoz, paid total compensation between \$3.5 million and \$4.0 million to three additional named executive officers.

In September 2015, CSX changed several senior leadership roles after the departure of President and Chief Operating Officer Oscar Munoz to become the CEO of United Continental Holdings. First, CSX appointed Clarence Gooden as president. Gooden, 64, served as executive vice president and chief sales and marketing officer since April 2004. Second, back-filling Gooden's role is Fredrik Eliasson, who served as CFO since 2012 and VP of sales and marketing of chemicals and fertilizer from 2011-12 and VP of emerging markets from 2009-11. Third, Cindy Sanborn advances from VP of operations to executive VP and COO. Sanborn served as chief transportation officer from 2009-15 and VP of northern region operations from 2007-09. Finally, CSX appointed Frank Lonegro to executive VP and chief financial officer from VP of service design (since early 2015). Before this year, Lonegro was VP of mechanical from 2012-15 and



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president of CSX Technology from 2007-12 plus VP of internal audit from 2005-07.

We're not concerned about these appointments disrupting CSX's operations, because they advance highly tenured railroaders to positions of strong influence in departments where they have material experience. Indeed, most of these leaders were in positions of significant responsibility through the railroad renaissance that began around 2004. We consider operations to be a critical role in a railroad and note in particular that new COO Sanborn brings even greater railroad operations experience than Munoz brought to the role. He had been COO since January 2012 and was CFO since May 2003; Sanborn has been an operations executive at the rail since 2007.

We consider CSX to be a prudent steward of shareholder capital as a result of continued investment in maintaining the rail network and growing intermodal capacity, as well as the return of cash to shareholders via an increasing dividend (doubled from 2008 to 2012) and sizable share repurchases at market prices below our fair value estimate.



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## **Analyst Notes**

### Significant Leadership Changes at CSX in Wake of COO Oscar Munoz's Move to CEO of United Continental 08 Sep 2015

CSX changed several senior leadership roles on Sept. 8 after the departure of President and Chief Operating Officer Oscar Munoz. Munoz resigned from CSX to become the president and CEO of United Continental Holdings. We're not alarmed by these changes and hold fast to our wide moat rating.

First, CSX appointed Clarence Gooden as president. Gooden, 64, served as executive vice president and chief sales and marketing officer since April 2004. Second, back-filling Gooden's role is Fredrik Eliasson, who served as CFO since 2012, VP of sales and marketing of chemicals and fertilizer from 2011-12, and VP of emerging markets from 2009-11. Third, Cindy Sanborn advances from VP of operations to executive VP and COO. Sanborn served as chief transportation officer from 2009-15 and VP of northern region operations from 2007-09. Finally, CSX appointed Frank Lonegro to the role of executive VP and CFO from VP of service design (since early 2015). Lonegro was VP of mechanical from 2012-15 and president of CSX Technology from 2007-12 plus VP of internal audit from 2005-07.

We think Munoz did a fine job during his three and a half years as COO and nearly nine years as CFO at CSX; we considered him a likely successor to CEO Michael Ward. Munoz served in top leadership roles during an absolutely transformative period for CSX. That said, we're not concerned about these appointments disrupting CSX's operations, because they advance highly experienced railroaders to positions of strong influence in departments where they have material experience. Indeed, most of these leaders were in positions of significant responsibility through the railroad renaissance that began around 2004. We consider operations to be a critical role in a railroad, and note that new COO Sanborn brings even greater railroad operations experience than Munoz brought to the role. He

had been COO since January 2012 and was CFO since May 2003; Sanborn has been an operations executive at the rail since 2007.

### Clean Power Plan a Negative for Railroads, but the Rails Comprise More than Coal 04 Aug 2015

The Environmental Protection Agency's "final" Clean Power Plan announced Aug. 3 contains only downside for the rails, especially those with significant exposure to steam coal: CSX, Norfolk Southern, and Union Pacific. Coal is weak in 2015 due to cheap natural gas and retiring plants related to the Mercury and Air Toxics Standards. CPP will probably force more retirements, but the magnitude, timing (especially the planning and construction needed to meet the targets), and legality are uncertain, and state-specific goals will affect coal basins differently. With lawsuits likely and some states vowing noncompliance, our coal analysts don't think the current CPP will survive to full implementation. The final rule pushes the compliance start to 2022 from 2020 but lifts the emissions-reduction target to 32% below 2005 levels versus 30% in the draft.

Our discounted cash flow models project volume, rates, and expenses through 2019. The Energy Information Administration's May analysis of the CPP compared its reference case, which aligns with our base case, to coal production under the CPP and estimates that tonnage would decline 20% from 2013 levels by the 2020 implementation (now 2022), and drop 25% from the 2013 reference by 2025. EIA expects a slight increase in coal beyond 2030 as coal plants operate at higher utilization, renewables contribute more, and gas prices rise. CPP implementation would likely be later than this, but we tested a 25% decline in coal volume in the 2019 final year of our discrete projections (more severe than the 20% EIA projects for 2020) and found that the fair value impact on the above rails is a negative 2.1%-3.8%. If we also reduce EBIT margin 100 basis points,



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## **Analyst Notes**

the total impact is a negative 4.9%-6.1%, worst at UP. We are maintaining our fair value estimates because of the relatively modest impact of declines more severe and earlier than likely under CPP. We expect coal to contribute less than 20% of total 2015 revenue at all rails we cover.

We direct investors to our July 16 report "Coal Can't Compromise Railroad Economic Moats," and highlight exhibits 1 (coal volume and revenue exposure at all rails) and 18 (end-market exposure). Also, our utilities analysts present analysis of the draft CPP and the utilities that it will affect in our February Utilities Observer "Morningstar Introduces the Clean Power Plan Portfolio."

# EPA's Final Carbon Rules Positive for Clean Generation and Transmission, Negative for Coal 03 Aug 2015

The Environmental Protection Agency's final Clean Power Plan announced on Aug. 3 offers what we consider a mix of moderate positive and negative changes for utilities from the draft proposal issued in June 2014.

We are reaffirming our fair value estimates, moats, and moat trend ratings for all utilities, but we do not include explicit impacts from the CPP in our forecasts or fair value estimates. We think the rules will face stiff legal and political opposition and could change significantly. If the rules do take effect as written, beneficiaries should be low-carbon power producers such as Exelon, NextEra Energy, and Calpine; and electric transmission developers like wide moat ITC Holdings.

For coal miners and railroads, we are reaffirming our fair value estimates and moat ratings. Coal volumes are already facing near-term weakness from MATS-related plant closures. We forecast coal demand to stabilize as natural gas prices rise and the surviving coal fleet remains economical. CPP could force another wave of closures that would add additional pressure on coal, but the magnitude, timing, and legality remain uncertain. Furthermore, state-

specific goals will impact the various coal basins differently. With lawsuits likely and some states vowing noncompliance, we do not think CPP in its current form will survive to full implementation.

The final rule extends the start of the compliance period to 2022 from 2020 but boosts the emissions reduction target to 32% from 2005 levels versus 30% in the draft. We still think the timeline is the biggest challenge given the planning and construction requirements to meet the target. Southern Company and SCANA should benefit from changes that give their home states more credit for their new nuclear projects.

We don't think the rules are strict enough to save Exelon's three Illinois nuclear plants we think are more likely than not to retire. We recently cut our Exelon fair value estimate to \$35 per share from \$37.

We present a detailed analysis of the draft CPP and the utilities that it will impact in our Utilities Observer, "Morningstar Introduces the Clean Power Plan Portfolio," published in February. We analyzed the impacts on railroads from lower coal demand in "Coal Can't Compromise Railroad Economic Moats," published in July.

### CSX Is Greater Than the Sum of Its Coal, Proves It With Record Operating Ratio, EBIT, and EPS 14 Jul 2015

CSX delivered operating income over \$1 billion for the first time and reached an all-time best 66.8% operating ratio in the second quarter. Coal is a high-margin business and made up 31% of revenue as recently as 2011. We project that coal will contribute only 20% of sales this year, but this quarter's performance shows again that this rail is much more than its coal book.

Management guided to mid- to high-single-digit EPS growth for the full year, including a 10% coal carload decline and export coal of just 30 million tons. This domestic decline is 130 basis points greater than what we modeled, and the



Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
27.31 USD	37.00 USD	25.90 USD	49.95 USD	Medium	Wide	Stable	Standard	Transportation & Logistics

## **Analyst Notes**

export is what we already employ. The firm expects margin expansion—we already model 150 basis points of improvement in full-year 2015, but this quarter's record operating ratio is 250 basis points better than the prior-year period, so we may improve our cost assumptions after discussion with management on the July 15 earnings call. A 35% decrease in the price of locomotive fuel certainly helped.

CSX's second-quarter revenue dropped 6% as carloads declined 1%, including a steep 11% in coal and 18% in metals, but agriculture, fertilizers, food, and forest products were also negative. Sounds gloomy, but intermodal was up 5% and it's the largest-volume "commodity," so it exerts strong pull. Chemicals and autos are also large and positive in the period. Revenue per unit declined, but this is unsurprising given cheaper fuel, which leads to lower fuel surcharges. Lower surcharges benefit the operating ratio a bit, but CSX improved all-in pricing 3.5% (3.9% excluding coal). On solid pricing power and solid operational execution, we maintain our fair value estimate and wide moat rating.

### CSX Grows Operating Income 14% Despite Soft Coal Demand 15 Apr 2015

Cheap natural gas tempered coal demand and utility stockpiles are high, so we don't anticipate an imminent resurgence in coal, but CSX decreased expenses 4% on flattish volume and revenue to generate 14% EBIT growth. The rail looks to easily outpace its eastern peer Norfolk Southern, which on April 14 preannounced an anticipated 15% decline in first-quarter EPS, although we expect Norfolk's coal declined a more severe 10% versus CSX's 1% decline in coal carloads. CSX's quarterly results were clean, with benefits of liquidated damages in coal contracts offset by a train accident cost of about the same amount, and it improved its operating ratio 330 basis points to 72.2%.

Generally the first is the lowest margin quarter, and results don't differ much from our projections, so we are not currently changing our valuation drivers nor our wide moat rating.

Pricing was stronger than the flat revenue per unit might suggest. Same-store sales pricing excluding fuel was up 1.6% all in and up 3.4% in the two non-coal segments, merchandise and intermodal. Based on total carloads we estimate coal revenue per unit declined 6.6% due to cheaper export coal pricing and the structure of CSX fixed/variable coal contracts (more low-rate fixed shipped in the period). Still, a 3.4% improvement in same-store pricing ex-fuel is healthy and above typical rail cost inflation we'd estimate by at least a percentage point.

Management expects about half of its book to be volume-favorable in 2015, including intermodal, minerals, waste, equipment, food, and consumer, but based on coal headwinds greater than previously anticipated, it now anticipates 2015 will yield mid- to high-single digit EPS growth rather than prior expectations of double-digit. Despite more modest guidance, CSX boosted its dividend 13%, increased its payout ratio guidance to 30%-40% (versus 30%-35%), and initiated a \$2 billion buyback program for the next two years. We expect CSX will raise incremental debt to fund this program.



Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
27.31 USD	37.00 USD	25.90 USD	49.95 USD	Medium	Wide	Stable	Standard	Transportation & Logistics

# Morningstar Analyst Forecasts

Financial Summary and Forecasts							
Fiscal Year Ends in December						Forecast	
0 1 (9/ )/ )//	3-Year	2042	2040	2044	2245	2242	5-Year
Growth (% YoY) Revenue	Hist. CAGR 2.4	2012 -0.3	2013 2.2	2014 5.4	2015 -7.5	2016 1.9	Proj. CAGF 1.1
EBIT	1.4	-0.3 -0.2	0.3	4.0	-7.3 2.2	6.8	5.3
EBITDA	2.3	1.7	1.2	4.0	2.2	3.2	4.3
Net Income	1.3	0.5	0.1	3.4	1.1	8.0	5.1
Diluted EPS	4.2	5.2	2.1	5.1	4.2	11.1	7.8
Earnings Before Interest, after Tax	-2.3	-17.8	6.8	6.2	12.6	6.6	7.3
Free Cash Flow	6.6	-19.9	41.1	7.2	13.2	16.6	10.1
	- 11						
Profitability	3-Year Hist. Avg	2012	2013	2014	2015	2016	5-Year Proj. Avg
Operating Margin %	29.0	29.5	28.9	28.5	31.5	33.0	33.9
EBITDA Margin %	38.0	38.5	38.1	37.6	41.5	42.0	43.1
Net Margin %	15.5	15.8	15.5	15.2	16.6	17.6	18.0
Free Cash Flow Margin %	10.9	8.7	12.0	12.2	14.9	17.0	17.5
ROIC %	11.2	12.3	10.7	10.5	11.2	11.5	11.9
Adjusted ROIC %	11.2	12.3	10.7	10.5	11.2	11.5	11.9
Return on Assets %	6.0	6.2	6.0	5.9	5.7	5.9	6.0
Return on Equity %	19.3	21.0	19.0	17.8	17.2	18.0	18.2
	3-Year						5-Year
Leverage	Hist. Avg	2012	2013	2014	2015	2016	Proj. Avg
Debt/Capital	0.49	0.52	0.48	0.47	0.48	0.48	0.48
Total Debt/EBITDA	2.10	2.17	2.09	2.04	2.16	2.19	2.14
EBITDA/Interest Expense	8.29	7.99	8.14	8.74	8.43	8.30	8.06

Valuation Summary and F	orecasts			
	2013	2014	2015(E)	2016(E)
Price/Fair Value	0.96	1.04	_	_
Price/Earnings	15.7	18.9	13.7	12.2
EV/EBITDA	8.2	9.3	7.4	7.1
EV/EBIT	10.8	12.3	9.7	9.1
Free Cash Flow Yield %	3.3	2.5	5.1	6.1
Dividend Yield %	2.1	1.8	2.5	2.7
Key Valuation Drivers	Z.1	1.0	2.5	
	Z.1 	1.0	2.0	9.0
Key Valuation Drivers	2.1	1.0	2.0	
Key Valuation Drivers Cost of Equity %		1.0	2.5	9.0
Key Valuation Drivers Cost of Equity % Pre-Tax Cost of Debt %		1.0	2.5	9.0
Key Valuation Drivers Cost of Equity % Pre-Tax Cost of Debt % Weighted Average Cost of Ca		1.0	2.5	9.1 6.1 8.2 23.1
Key Valuation Drivers Cost of Equity % Pre-Tax Cost of Debt % Weighted Average Cost of Ca Long-Run Tax Rate %		1.0	2.5	9.0 6.1 8.2

Additional estimates and scenarios available for download at http://select.morningstar.com.

Discounted Cash Flow Valuation	l		
	USD Mil	Firm Value (%)	Per Share Value
Present Value Stage I	8,590	19.5	8.84
Present Value Stage II	17,743	40.3	18.25
Present Value Stage III	17,732	40.2	18.24
Total Firm Value	44,065	100.0	45.33
Cash and Equivalents	961	_	0.99
Debt	-9,742	_	-10.02
Preferred Stock	_	_	_
Other Adjustments	-871	_	-0.90
Equity Value	34,412	_	35.40
Projected Diluted Shares	972		
Fair Value per Share (USD)	_		
The data in the table above represent bas	e-case forecasts	s in the compar	ıv's reportina

The data in the table above represent base-case forecasts in the company's reporting currency as of the beginning of the current year. Our fair value estimate may differ from the equity value per share shown above due to our time value of money adjustment and in cases where probability-weighted scenario analysis is performed.



**Last Price** Moat Trend™ **Fair Value Consider Buy Consider Sell** Uncertainty Economic Moat™ Stewardship **Industry Group** Transportation & Logistics 27.31 USD 37.00 USD 25.90 USD 49.95 USD Medium Wide Stable Standard

# Morningstar Analyst Forecasts

Income Statement (USD Mil) Fiscal Year Ends in December				For	ecast
riscal teal clius III Decellibel	2012	2013	2014		2016 2016
Revenue	11,763	12,026	12,669	11,724	11,949
Cost of Goods Sold	8,299	8,553	9,056	8,031	8,006
Gross Profit	3,464	3,473	3,613	3,693	3,943
Selling, General & Administrative Expenses	_	_	_	_	_
Other Operating Expense (Income)	_	_	_	_	_
Other Operating Expense (Income)	_	_	_	_	_
Depreciation & Amortization (if reported separately)	_	_	_	_	_
Operating Income (ex charges)	3,464	3,473	3,613	3,693	3,943
Restructuring & Other Cash Charges	_	_	_	_	_
Impairment Charges (if reported separately)	_	_	_	_	_
Other Non-Cash (Income)/Charges	_				_
Operating Income (incl charges)	3,464	3,473	3,613	3,693	3,943
Interest Expense	566	562	545	578	605
Interest Income	73	11	-24	_	
Pre-Tax Income	2,971	2,922	3,044	3,116	3,338
Income Tax Expense	1,108	1,058	1,117	1,168	1,235
Other After-Tax Cash Gains (Losses)	_	_	_	_	_
Other After-Tax Non-Cash Gains (Losses)	_	_	_	_	_
(Minority Interest)	_	_	_	_	_
(Preferred Dividends)					
Net Income	1,863	1,864	1,927	1,947	2,103
Weighted Average Diluted Shares Outstanding	1,040	1,019	1,002	972	945
Diluted Earnings Per Share	1.79	1.83	1.92	2.00	2.23
Adjusted Net Income	1,863	1,864	1,927	1,947	2,103
Diluted Earnings Per Share (Adjusted)	1.79	1.83	1.92	2.00	2.23
Dividends Per Common Share	0.54	0.59	0.63	0.70	0.78
EBITDA	4,523	4,577	4,764	4,866	5,019
Adjusted EBITDA	4,523	4,577	4,764	4,866	5,019



Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
27.31 USD	37.00 USD	25.90 USD	49.95 USD	Medium	Wide	Stable	Standard	Transportation & Logistics

# Morningstar Analyst Forecasts

Balance Sheet (USD Mil)					
Fiscal Year Ends in December	2012	2013	2014	Fore	<u>ecast</u> 2016
Cash and Equivalents	1.371	1.079	961	1.528	1.828
Investments	1,371	1,073	JU 1	1,320	1,020
Accounts Receivable	1,114	1,052	1,129	1,060	1,080
Inventory	274	252	273	242	241
Deferred Tax Assets (Current)	119	155	141	141	141
Other Short Term Assets	75	64	68	68	68
Current Assets	2,953	2,602	2,572	3,039	3,358
Carron Associ	2,000	2,002	2,072	0,000	0,000
Net Property Plant, and Equipment	26,050	27,291	28,584	29,912	30,987
Goodwill	_	_	_	_	_
Other Intangibles	_	_	_	_	_
Deferred Tax Assets (Long-Term)	_	_	_	_	_
Other Long-Term Operating Assets	1,720	1,889	1,897	1,897	1,897
Long-Term Non-Operating Assets	_	_	_	_	_
Total Assets	30,723	31,782	33,053	34,848	36,242
Accounts Payable	948	957	845	880	877
Short-Term Debt	780	533	228	500	500
Deferred Tax Liabilities (Current)	_	_	_	_	_
Other Short-Term Liabilities	917	934	1,034	1,034	1,034
Current Liabilities	2,645	2,424	2,107	2,414	2,411
Long-Term Debt	9,052	9,022	9,514	10,000	10,500
Deferred Tax Liabilities (Long-Term)	8,096	8,662	8,858	9,464	10,088
Other Long-Term Operating Liabilities	337	300	276	276	276
Long-Term Non-Operating Liabilities	1,457	870	1,122	1,122	1,122
Total Liabilities	21,587	21,278	21,877	23,276	24,398
Preferred Stock	_	_	_	_	_
Common Stock	1,020	1,009	992	992	992
Additional Paid-in Capital	28	61	92	92	92
Retained Earnings (Deficit)	9,010	9,936	10,734	12,001	13,368
(Treasury Stock)	_	_	_	-871	-1,966
Other Equity	-936	-523	-666	-666	-666
Shareholder's Equity	9,122	10,483	11,152	11,547	11,820
Minority Interest	14	21	24	24	24
Total Equity	9,136	10,504	11,176	11,571	11,844



# CSX Corp CSX (NYSE) | $\star\star\star\star$

**Last Price** Moat Trend™ **Fair Value Consider Buy Consider Sell** Uncertainty Economic Moat™ Stewardship **Industry Group** 49.95 USD Transportation & Logistics 27.31 USD 37.00 USD 25.90 USD Medium Wide Stable Standard

# Morningstar Analyst Forecasts

Cash Flow (USD Mil)					
Fiscal Year Ends in December	2010	0040	0044		ecast
N	2012	2013	2014	2015	2016
Net Income	1,863	1,864	1,927	1,947	2,103
Depreciation	1,059	1,104	1,151	1,172	1,075
Amortization	_	_	_	_	_
Stock-Based Compensation	_	_	_	_	_
Impairment of Goodwill	_	_	_	_	_
Impairment of Other Intangibles	_	_	_	_	_
Deferred Taxes	592	300	298	606	624
Other Non-Cash Adjustments	-505	-105	3	_	_
(Increase) Decrease in Accounts Receivable	61	-6	-119	69	-20
(Increase) Decrease in Inventory	_	_	_	31	1
Change in Other Short-Term Assets	-32	36	-26	_	_
Increase (Decrease) in Accounts Payable	-4	28	1	35	-3
Change in Other Short-Term Liabilities	-88	46	108	_	_
Cash From Operations	2,946	3,267	3,343	3,861	3,781
(Capital Expenditures)	-2,341	-2,313	-2,449	-2,500	-2,151
Net (Acquisitions), Asset Sales, and Disposals	186	53	62	_	_
Net Sales (Purchases) of Investments	_	_	_	_	_
Other Investing Cash Flows	-122	33	204	_	_
Cash From Investing	-2,277	-2,227	-2,183	-2,500	-2,151
Common Stock Issuance (or Repurchase)	-720	-344	-517	-871	-1,094
Common Stock (Dividends)	-558	-600	-629	-680	-736
Short-Term Debt Issuance (or Retirement)	_	_	_	272	_
Long-Term Debt Issuance (or Retirement)	592	-280	67	486	500
Other Financing Cash Flows	18	-8	-4	_	_
Cash From Financing	-668	-1,232	-1,083	-794	-1,330
Exchange Rates, Discontinued Ops, etc. (net)	_	_	_	_	_
Net Change in Cash	1	-192	77	567	300



Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
27.31 USD	37.00 USD	25.90 USD	49.95 USD	Medium	Wide	Stable	Standard	Transportation & Logistics

# Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

Valuation Analysis																
		Price/Ea	rnings		EV/EBITD	Α		Price/Fre	ee Cash Flo	w	Price/Bo	ok		Price/Sa	les	
Company/Ticker	Price/Fair Value	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Union Pacific Corp UNP USA	0.81	20.6	16.3	13.8	10.8	8.8	7.8	34.6	22.3	18.8	5.0	3.6	3.4	4.4	3.5	3.3
Canadian National Railway Co CNI	1.00	17.9	13.9	12.8	12.7	11.6	10.8	31.0	26.0	21.5	4.8	4.2	4.0	5.3	4.8	4.6
Canadian Pacific Railway Ltd CP CAN	0.94	26.5	19.0	16.9	14.5	11.8	11.0	55.1	32.3	23.7	6.6	5.5	5.5	5.6	4.7	4.5
Norfolk Southern Corp NSC USA	0.77	17.1	14.9	12.2	9.1	8.1	7.2	46.0	33.3	19.2	2.7	1.9	1.9	2.9	2.3	2.2
Kansas City Southern Inc KSU USA	0.90	26.6	19.5	16.5	14.4	10.8	9.5	NM	31.5	25.3	3.6	2.6	2.4	5.2	4.0	3.7
Average		21.7	16.7	14.4	12.3	10.2	9.3	41.7	29.1	21.7	4.5	3.6	3.4	4.7	3.9	3.7
CSX Corp CSX US	0.74	18.9	13.7	12.2	9.3	7.4	7.1	40.2	19.7	16.5	3.2	2.3	2.3	2.8	2.3	2.2

Returns Analysis																
•		ROIC %			Adjusted	ROIC %		Return o	n Equity %		Return o	n Assets %		Dividen	d Yield %	
Company/Ticker	Last Historical Year Total Assets (Mil)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Union Pacific Corp UNP USA	52,716 USD	15.3	14.4	15.6	15.3	14.4	15.6	24.6	22.6	24.7	10.2	9.0	9.8	1.6	2.3	2.5
Canadian National Railway Co CNI	31,792 CAD	14.0	14.8	15.6	14.0	14.8	15.6	24.0	23.6	23.4	10.2	10.0	9.9	1.3	1.6	1.8
Canadian Pacific Railway Ltd CP CAN	16,640 CAD	14.8	15.3	15.8	15.0	15.5	16.0	23.2	29.8	31.7	8.8	9.9	10.2	0.7	0.8	0.9
Norfolk Southern Corp NSC USA	33,241 USD	10.6	9.4	10.4	10.6	9.4	10.4	16.9	12.9	15.3	6.1	4.8	5.5	2.0	3.1	3.0
Kansas City Southern Inc KSU USA	8,091 USD	10.3	11.4	11.1	10.3	11.4	11.1	14.1	13.6	14.8	6.5	6.3	6.8	0.9	1.4	1.5
Average		13.0	13.1	13.7	13.0	13.1	13.7	20.6	20.5	22.0	8.4	8.0	8.4	1.3	1.8	1.9
CSX Corp CSX US	<b>33,053</b> USD	10.5	11.2	11.5	10.5	11.2	11.5	17.8	17.2	18.0	5.9	<b>5.7</b>	5.9	1.8	2.5	2.7

Growth Analysis																
	Last Historical Year Revenue	Revenue	Growth %		EBIT Gro	wth %		EPS Gro	wth %		Free Ca	sh Flow Gro	wth %	Dividen	I/Share Gro	owth %
Company/Ticker	(Mil)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Union Pacific Corp UNP USA	23,988 USD	9.2	-5.2	5.7	17.6	-3.9	14.3	22.9	-2.4	17.7	-7.8	16.1	16.9	29.1	10.0	9.5
Canadian National Railway Co CNI	12,134 CAD	14.7	4.8	4.8	19.4	7.1	7.5	24.6	8.4	8.8	23.7	9.8	22.4	16.3	25.0	12.0
Canadian Pacific Railway Ltd CP CAN	6,620 CAD	7.9	1.2	6.3	26.4	14.7	7.0	23.4	22.5	12.3	15.9	22.8	47.7	-	15.7	16.0
Norfolk Southern Corp NSC USA	11,624 USD	3.4	-9.2	3.0	9.8	-15.8	15.7	5.7	-17.3	22.0	-21.9	-1.7	47.8	8.8	6.3	-3.2
Kansas City Southern Inc KSU USA	2,577 USD	8.8	0.5	7.3	9.6	8.8	16.8	42.8	5.3	17.9	-109.2	-5,103.3	22.4	30.2	17.9	8.3
Average		8.8	-1.6	5.4	16.6	2.2	12.3	23.9	3.3	15.7	-19.9	-1,011.3	31.4	21.1	15.0	8.5
CSX Corp CSX US	<b>12,669</b> USD	5.4	-7.5	1.9	4.0	2.2	6.8	5.1	4.2	11.1	7.2	13.2	16.6	6.8	11.1	11.3



Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
27.31 USD	37.00 USD	25.90 USD	49.95 USD	Medium	Wide	Stable	Standard	Transportation & Logistics

# Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

Profitability Analysis																
	Last Historical Year	Gross M	argin %		EBITDA I	Margin %		Operatin	g Margin %	0	Net Mar	gin %		Free Cas	h Flow Ma	rgin %
Company/Ticker	Net Income (Mil)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Union Pacific Corp UNP USA	5,215 USD	36.5	37.0	40.0	44.4	45.3	48.3	36.5	37.0	40.0	21.7	21.6	23.5	12.7	15.8	17.6
Canadian National Railway Co CNI	3,167 CAD	38.1	39.0	40.0	46.8	48.0	48.9	38.1	39.0	40.0	26.1	26.2	26.5	17.2	18.6	21.5
Canadian Pacific Railway Ltd CP CAN	1,473 CAD	35.3	40.0	40.2	43.6	48.6	48.7	35.3	40.0	40.2	22.3	25.4	25.7	10.2	14.7	18.8
Norfolk Southern Corp NSC USA	2,000 USD	30.8	28.5	32.0	39.0	37.9	41.4	30.8	28.5	32.0	17.2	15.2	17.4	6.3	6.8	11.4
Kansas City Southern Inc KSU USA	507 USD	31.4	34.0	37.0	41.4	44.5	47.5	31.4	34.0	37.0	19.7	20.5	22.1	-2.5	12.8	14.8
Average		34.4	35.7	37.8	43.0	44.9	47.0	34.4	35.7	37.8	21.4	21.8	23.0	8.8	13.7	16.8
CSX Corp CSX US	<b>1,927</b> USD	28.5	31.5	33.0	37.6	41.5	42.0	28.5	31.5	33.0	15.2	16.6	17.6	7.1	11.6	13.6

Leverage Analysis																
		Debt/Equ	ıity %		Debt/Tota	al Cap %		EBITDA/	Interest Ex	p.	Total Del	ot/EBITDA		Assets/I	quity	
Company/Ticker Union Pacific Corp UNP USA	Last Historical Year Total Debt (Mil) 11,480 USD	2014 54.2	2015(E) 58.4	2016(E) 57.5	2014 35.1	2015(E) 36.9	2016(E) 36.5	2014 20.3	2015(E) 15.3	2016(E) 16.6	2014 1 1	2015(E) 1.3	2016(E) 1 2	2014 2.5	2015(E) 2.5	2016(E) 2.5
Canadian National Railway Co CNI	8,409 CAD	62.4	64.6	64.7	38.4	39.3	39.3	15.3	14.3	12.6	1.5	1.6	1.5	2.4	2.4	2.4
Canadian Pacific Railway Ltd CP CAN	5,659 CAD	100.9	111.0	116.3	50.2	52.6	53.8	10.2	10.1	10.4	2.0	2.0	1.9	3.0	3.1	3.2
Norfolk Southern Corp NSC USA	9,026 USD	72.7	77.0	78.5	42.1	43.5	44.0	8.3	7.0	7.7	2.0	2.4	2.2	2.7	2.8	2.8
Kansas City Southern Inc KSU USA	2,316 USD	61.7	62.0	63.5	38.1	38.3	38.8	14.7	12.2	13.0	2.2	2.2	2.0	2.2	2.2	2.2
Average		70.4	74.6	76.1	40.8	42.1	42.5	13.8	11.8	12.1	1.8	1.9	1.8	2.6	2.6	2.6
CSX Corp CSX US	<b>9,742</b> USD	87.4	90.9	93.1	46.6	47.6	48.2	8.7	8.4	8.3	2.0	2.2	2.2	3.0	3.0	3.1

Liquidity Analysis																
	Market Cap	Cash per	ash per Share			atio		Quick Ra	tio		Cash/Sh	ort-Term De	ebt	Payout F	Ratio %	
Company/Ticker	(Mil)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Union Pacific Corp UNP USA	79,741 USD	1.76	3.29	3.71	1.24	1.54	1.64	1.05	1.37	1.47	3.43	5.72	6.31	33.0	37.2	34.6
Canadian National Railway Co CNI	46,417 USD	0.06	1.76	2.57	0.94	1.58	1.85	0.79	1.42	1.69	0.10	2.81	4.00	26.0	30.0	30.9
Canadian Pacific Railway Ltd CP CAN	31,744 CAD	1.30	4.25	5.27	0.91	1.22	1.37	0.78	1.11	1.25	_	7.67	_	16.5	15.7	16.2
Norfolk Southern Corp NSC USA	23,813 USD	3.11	1.94	1.30	1.56	1.08	0.99	1.43	0.98	0.89	9.54	1.17	0.76	34.7	44.6	35.4
Kansas City Southern Inc KSU USA	10,393 USD	3.15	5.56	7.69	0.91	2.36	2.80	0.79	2.09	2.53	0.73	12.18	16.54	24.6	27.3	25.1
Average		1.88	3.36	4.11	1.11	1.56	1.73	0.97	1.39	1.57	3.45	5.91	6.90	27.0	31.0	28.4
CSX Corp CSX US	<b>26,866</b> USD	0.96	1.57	1.93	1.22	1.26	1.39	1.09	1.16	1.29	4.21	3.06	3.66	32.8	34.9	35.0



# **Research Methodology for Valuing Companies**

#### **Components of Our Methodology**

- ▶ Economic Moat™ Rating
- ▶ Moat Trend™ Rating
- ► Moat Valuation
- ► Three-Stage Discounted Cash Flow
- ▶ Weighted Average Cost of Capital
- ► Fair Value Estimate
- Scenario Analysis
- Uncertainty Ratings
- Margin of Safety
- ► Consider Buying/Selling
- Stewardship Rating

We believe 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 and the current market price. This process ultimately culminates in our single-point star rating. Underlying this rating is a fundamentally focused methodology and a robust, standardized set of procedures and core valuation tools used by Morningstar's equity analysts.

The concept of the Morningstar Economic Moat™
Rating plays a vital role not only in our qualitative
assessment of a firm's investment potential, but
also in our actual calculation of our fair value
estimates. We assign three moat ratings—none,
narrow, or wide—as well as the Morningstar Moat
Trend™ Rating—positive, stable, or negative—to
each company we cover. Companies with a narrow
moat are those we believe are more likely than not
to achieve normalized excess returns on invested
capital over at least the next 10 years. Wide-moat
companies are those in which we have very
high confidence that excess returns will remain for

10 years, with excess returns more likely than not to remain for at least 20 years. The longer a firm generates economic profits, the higher its intrinsic value. The assumptions that we make about a firm's economic moat play a vital role in determining the length of "economic outperformance" that we assume in the terminal sections of our valuation model. To assess the sustainability of excess profits, analysts perform ongoing assessments of what we call the moat trend. A firm's moat trend is positive in cases where we think its sources of competitive advantage are growing stronger; stable where we don't anticipate changes to competitive advantages over the next several years; or negative when we see signs of deterioration.

At the heart of our valuation system is a detailed projection of a company's future cash flows. The first stage of our three-stage discounted cash flow model can last from 5 to 10 years and contains numerous detailed assumptions about various financial and operating items. The second stage of our model where a firm's return on new invested capital (RONIC) and earnings growth rate implicitly fade until the perpetuity year—can last anywhere from one year (for companies with no economic moat) to 10-15 years (for wide-moat companies). In our third stage, we assume the firm's RONIC equals its weighted average cost of capital, and we calculate a continuing value using a standard perpetuity formula. In deciding on the rate at which to discount future cash flows, we use a building block approach,

### **Morningstar Research Methodology for Valuing Companies**



Source: Morningstar, Inc.

## Detailed Methodology Documents and Materials\*

- ► Comprehensive Equity Research Methodology
- Uncertainty Methodology
- Cost of Equity Methodology
- ► Morningstar DCF Valuation Model
- ► Stewardship Rating Methodology

which takes into account expectations for market real return, inflation, country risk premia, corporate credit spread, and any additional systematic risk.

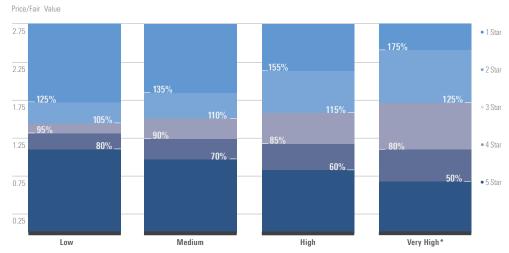
We also employ a number of other tools to augment our valuation process, including scenario analysis, where we assess the likelihood and performance of a business under different economic and firm-specific conditions. Our analysts model three scenarios for each company we cover, stresstesting the model and examining the distribution of resulting fair values.

The Morningstar Uncertainty Rating captures the range of likely potential fair values and uses it to assign the margin of safety required before investing, which in turn explicitly drives our stock star rating system. The 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, and other company-specific factors.

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.

### **Morningstar Margin of Safety and Star Rating Bands**



\* Occasionally a stock's uncertainty will be too high for us to estimate, in which case we label it Extreme.

Source: Morningstar, Inc.

<sup>\*</sup>Please contact a sales representative for more information.



Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
27.31 USD	37.00 USD	25.90 USD	49.95 USD	Medium	Wide	Stable	Standard	Transportation & Logistics



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