IOI ChartBook – Union Pacific (UNP)

This train has already left the station

May 24, 2016

Three Things You Should Know About Union Pacific

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- **The Shares are Overvalued.**

  This does not mean that the share price will crash tomorrow or even that it will not remain overvalued (or get more overvalued) for a long time into the future. The overvaluation is related to what we see as the market's assumption that a benign and supportive regulatory environment will continue forever. We have no way of knowing how long this regulatory environment will stay in place and neither do you.

  We see a fair value range of the mid-$50 level to the mid-$80 level and would not be excited about buying the shares until they traded at about half of present levels. See this article for more information: Union Pacific: This Train Has Already Left the Station.

- **UNP's Business is Very Strong Right Now.**

  Revenue growth has been good and the firm has pricing power (thanks to the regulatory environment). Profitability is sky high – higher than some Tech firms we cover – and may actually have room to grow a bit from here. It is investing about 45% of its Owners' Cash Profits (OCP) on investment project and still pays a decent dividend yield of 2.58%.

  That said, it looks like most of the profitability improvements has been made already, suggesting there is not a lot of room for the profit growth we saw over the past 10 years – where OCP jumped from the mid-teens percentages to the mid-twenties percentages.

- **UNP's Business Will Likely Weaken in the Future.**

  There are changes to UNP's business environment on the horizon. Its most important cargo – coal – is in secular decline and we don't think it has the ability to boost prices to offset falling volumes. Another important cargo type – "Intermodal" – will probably be negatively affected by improvements to the Panama Canal and ports on the East Coast of the U.S. See this report for more information: Valuation Driver Analysis of Union Pacific (UNP).

  I know it's a popular stock for value investors, thanks to Buffett's 2010 investment in Burlington Northern Santa Fe and Ackman's 2011 investment in Canadian Pacific (CP). Those investors got in at the right time. For the rest of us, the train has already left the station.

Valuation Overview

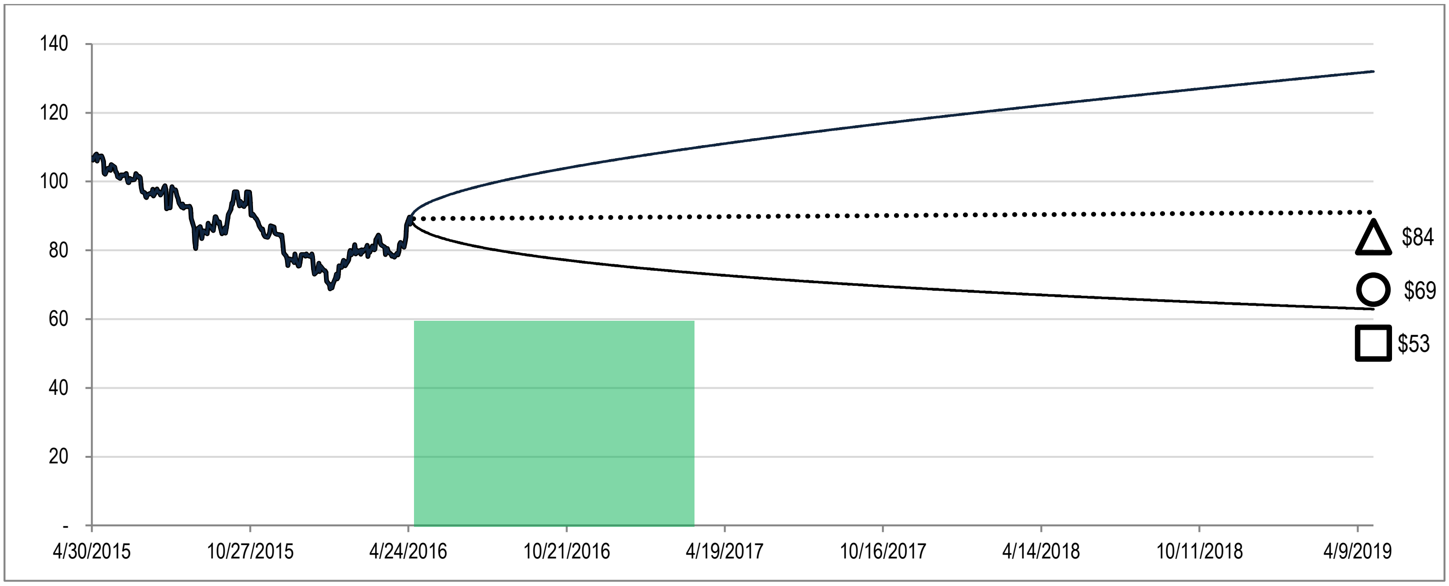


Figure 1. Source: YCharts, CBOE, IOI Analysis. Geometrical markers show IOI's best-case (triangle), worst-case (square), and equally-weighted average value (circle). Cone-shaped region indicates option market's projection of Union Pacific's future stock price. Shaded region represents the purchase of a put option on Union Pacific's stock.

We do not believe the company is worth what it is trading for if future cash flows are discounted at our standard 10% rate. However, a discount rate choice is a pretty tenuous thesis on which to rest an investment, so we consider the bearish long put investment shown above to be a low-confidence, speculative one. The report author has not personally invested in this structure.

	IOI Best Case	IOI Worst Case	Historical Median
Year 1-5 Average Revenue Growth	5%	0%	7% (5, 10-year)
Year 1-5 Average Profitability	27%	23%	23% (5-year)
Year 6-10 Cash Flow Growth	7%	5%	32%

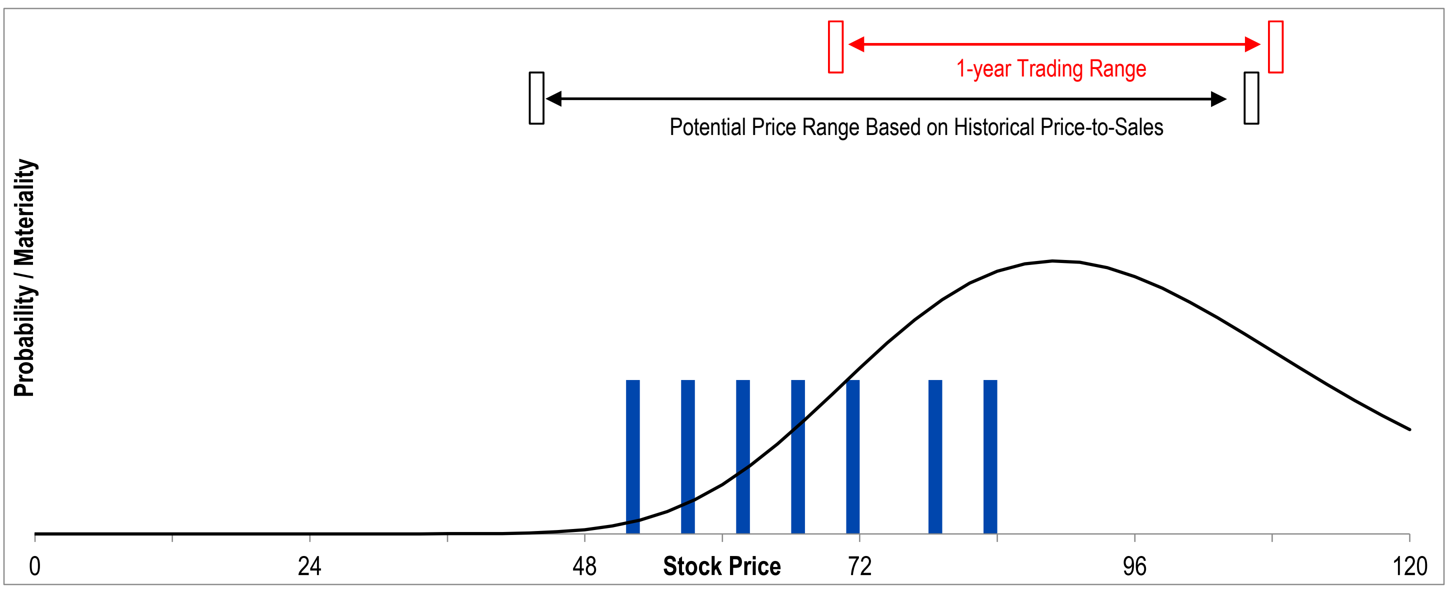


Figure 2. Source: CBOE, IOI Analysis

The historical price-to-sales ratio range shown above displays the top 85th percentile and bottom 15th percentile PSR multiplied by IOI's best- and worst-case revenue assumptions, respectively. We believe that the downside risk is brought about mainly due to uncertainty as to continuation of implicit government support for Union Pacific and its three rail transport co-oligopolists. All IOI discounted cash flow-based valuations use a standard discount rate yardstick of 10%. Considering that UNP receives tacit support from its regulators and may be considered an instrument of US industrial and infrastructure policy, this standard yardstick may or may not be appropriate. Using a 9% discount rate makes UNP fairly valued; using an 8% one look like a screaming bargain. Unable to handicap the continuation of government support for UNP's pricing and operations, we are reticent to change our discount rate. We would likely start selling puts on UNP in the $50 range and would be buyers of the shares in the $40 range.

Valuation Drivers

Revenue Growth

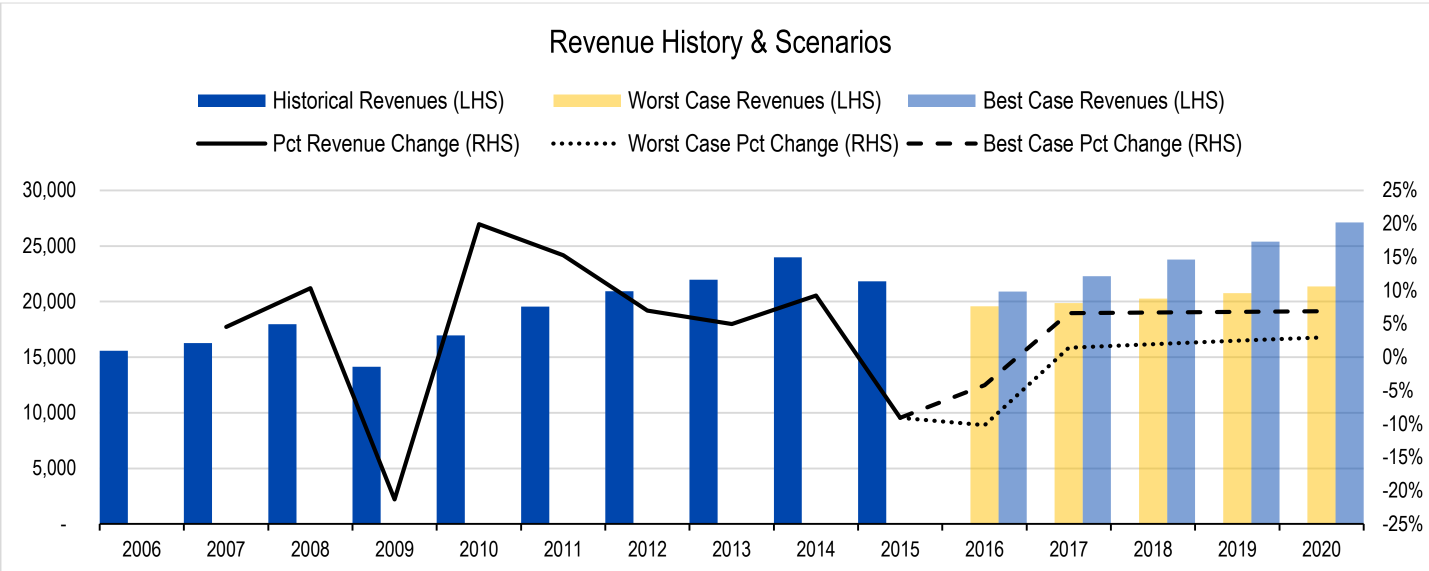


Figure 3. Source: Company Statements, IOI Analysis

Top line growth is boosted by two factors – fuel surcharges and repricing of legacy contracts. Fuel surcharges may be a feature of UNP's pricing in the future, but most legacy contracts have been reset by now, so revenue growth will more closely track freight volumes. A secular decline in coal volumes, combined with what may be a decline in intermodal shipments due to capacity improvements for the Panama Canal are two headwinds for UNP going forward.

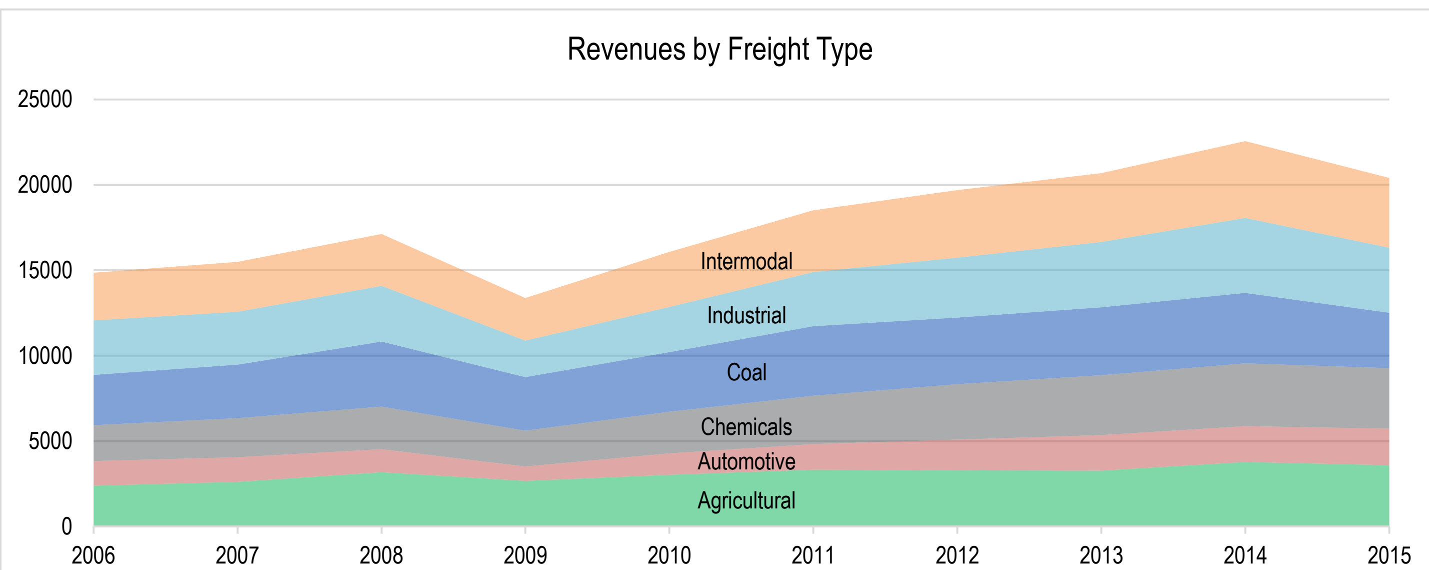


Figure 4. Source: Company Statements, IOI Analysis

The most important freight classification in terms of revenue share is Intermodal, which in 2015, made up 19% of total revenues. Coal freight had made up the largest revenue share for years (10 years out of the 1999-2015 period) but faced a steep fall-off last year; now it makes up the fifth largest source of revenues behind Industrial, Agricultural, and Chemicals, and Industrials.

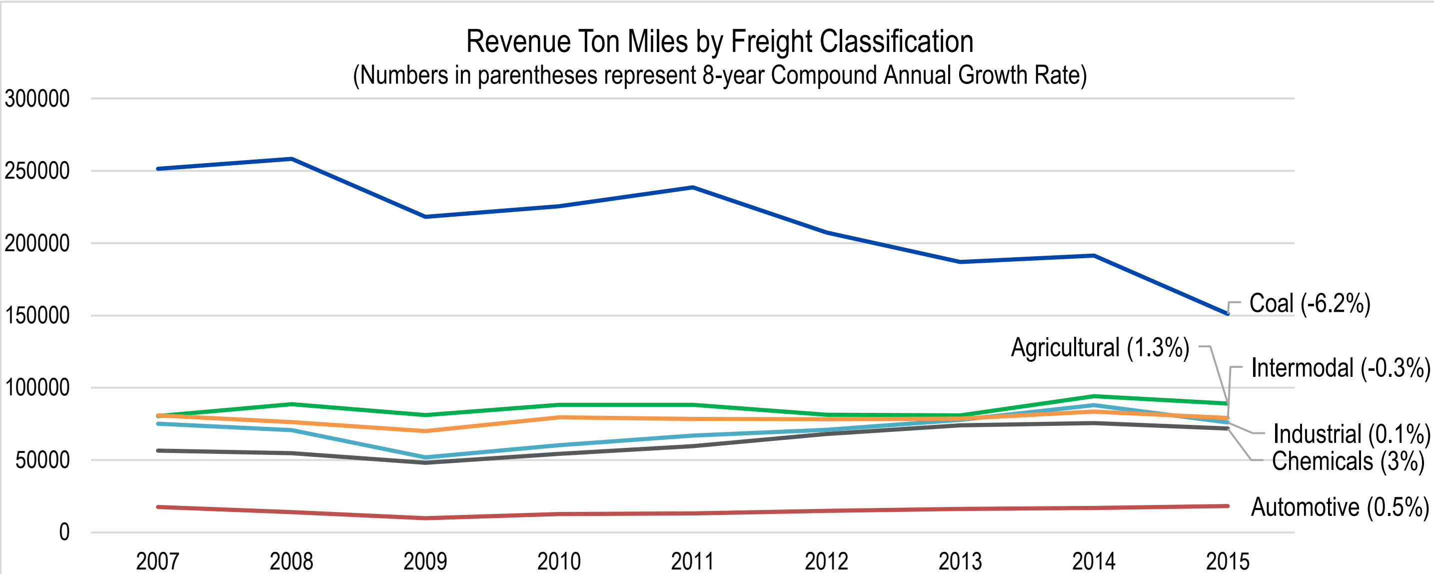


Figure 5. Source: Company Statements, IOI Analysis

Over the 2007-2015 period, revenue ton-miles – an industry standard measure of volume – decreased an average of 6% per year for coal, was slightly negative for intermodal, and was about flat for all other freight types except for chemicals, which increased at a rate of 3% per year. Interestingly, it looks as though UNP raised prices by the most in Coal and Intermodal over this time period – with a 12% and 6% average annual boost per year, respectively. Automobile transport is by far the most profitable freight category for UNP, but revenue ton-miles in this category are flat.

Profitability

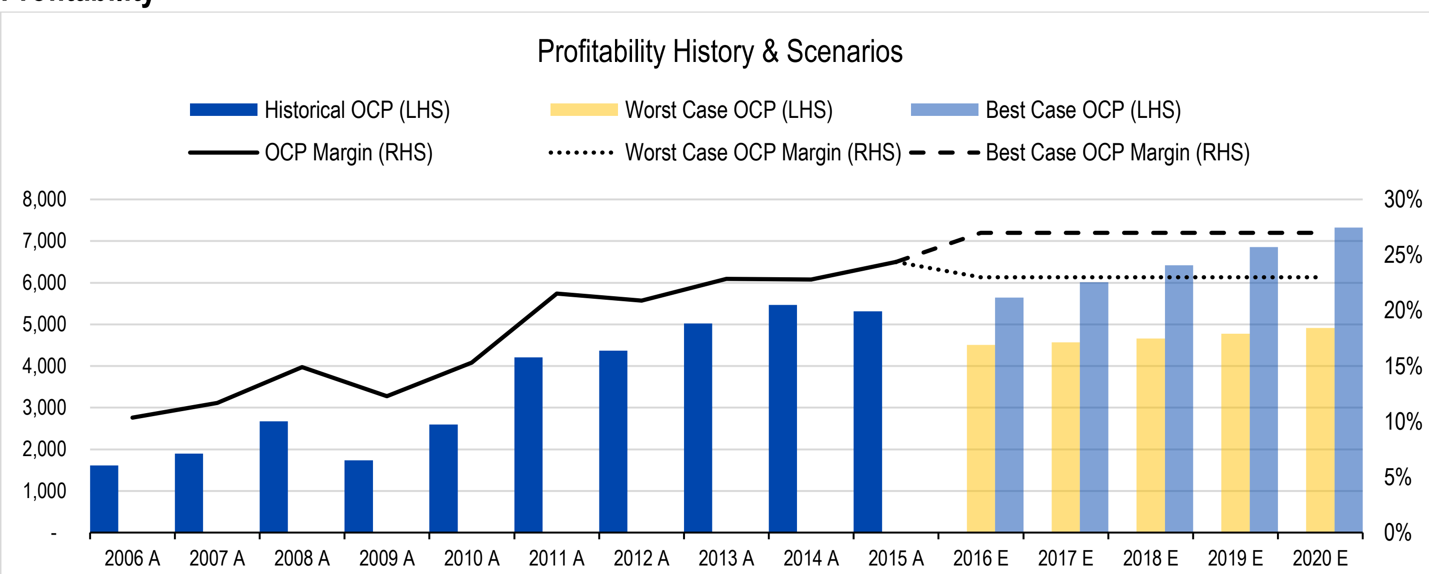


Figure 6. Source: Company Statements, IOI Analysis

Profitability is phenomenal for UNP – with an [Owners' Cash Profit (OCP)] margin approaching that of Apple (AAPL) and far exceeding that of IBM. Shippers complain of the difficulty in brining "rate cases" to the agency that regulates rail transport (rate cases are requests for regulatory review of prices charged by regulated entities like utility companies). When rate cases are brought in front of the regulator (the Surface Transportation Board), cases are just as likely to be decided in favor of the railroads as the shippers. This is despite rate increases in the hundreds of percent for some shippers – especially those that are "stranded" and have only one carrier from which to choose.

UNP's profitability is also affected by government rules to spur investment spending put in place post 9-11 and renewed for most years since. See the Investment Level section below.

Investment Level

Expansionary Cash Flow is IOI's measure of investment spending net of asset sales and divestments.

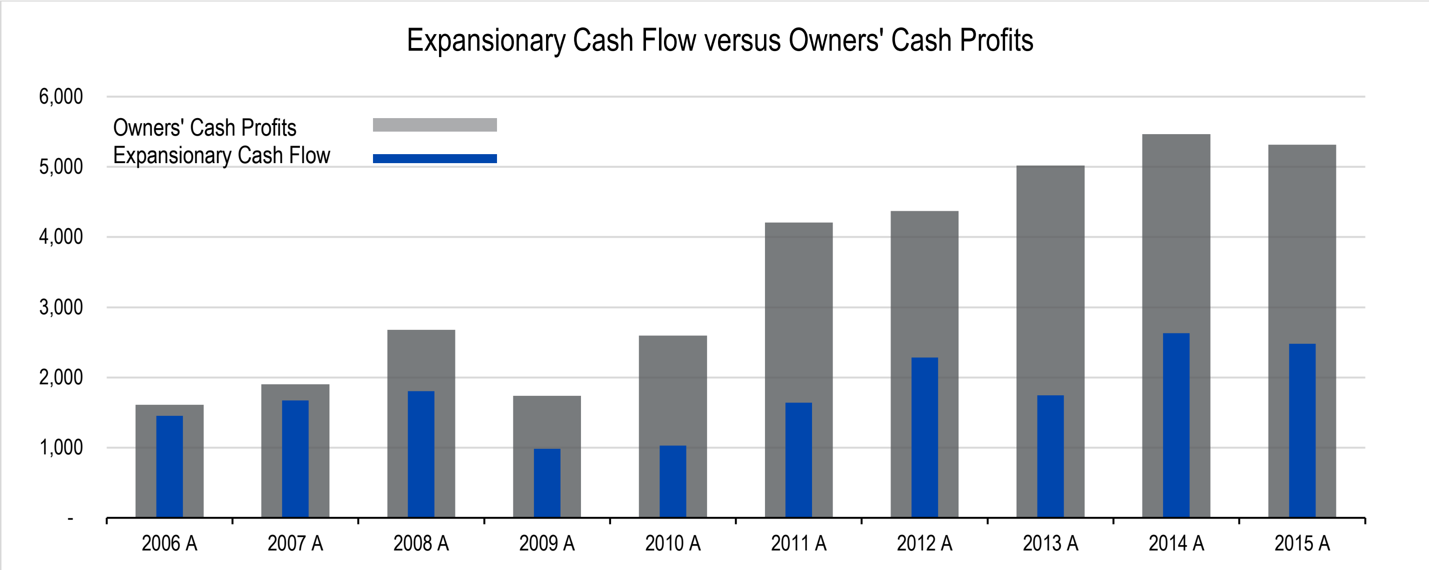


Figure 7. Source: Company Statements, IOI Analysis

Over the last 10 years, Union Pacific has spent a median 50% of its OCP on investment projects. These investments have helped UNP increase its efficiency, though the real profitability driver has been UNP's ability to increase prices on shippers.

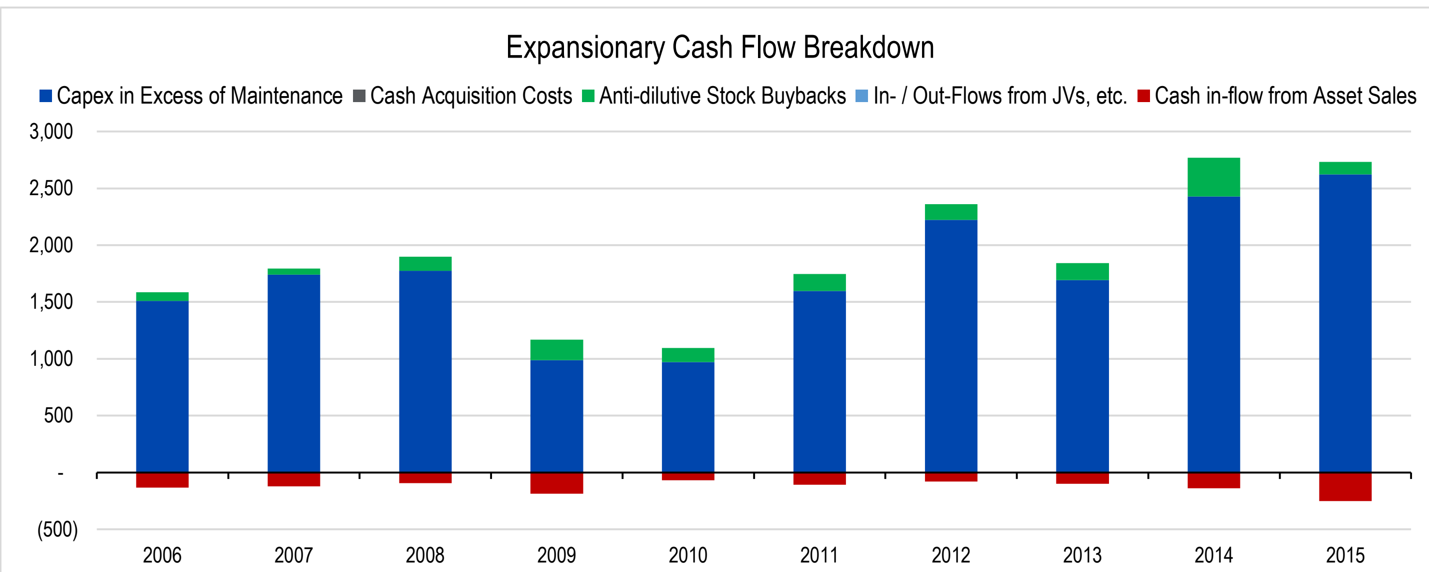


Figure 8. Source: Company Statements, IOI Analysis

We can see that most of UNP's expansionary spending is focused on traditional capital expenditure projects. It issues enough stock as compensation to its executives that it has had to spend a median amount of $131 million per year in buying back those dilutionary shares (these cash flows are represented by the green-shaded column segments above).

A rule that was designed to spur economic growth in the wake of the 9-11 attacks by allowing companies to accelerate the rate at which they charged depreciation has meant that capital spending projects have received a partial tax subsidy. Without this simulative rule in place, UNP's profits, measured by traditional methods and OCP, would be even higher.

Investment Efficacy

Corporate investments lead to profit growth. IOI measures profit growth versus the standard yardstick of nominal GDP growth to assess the efficacy of the company's past investments.

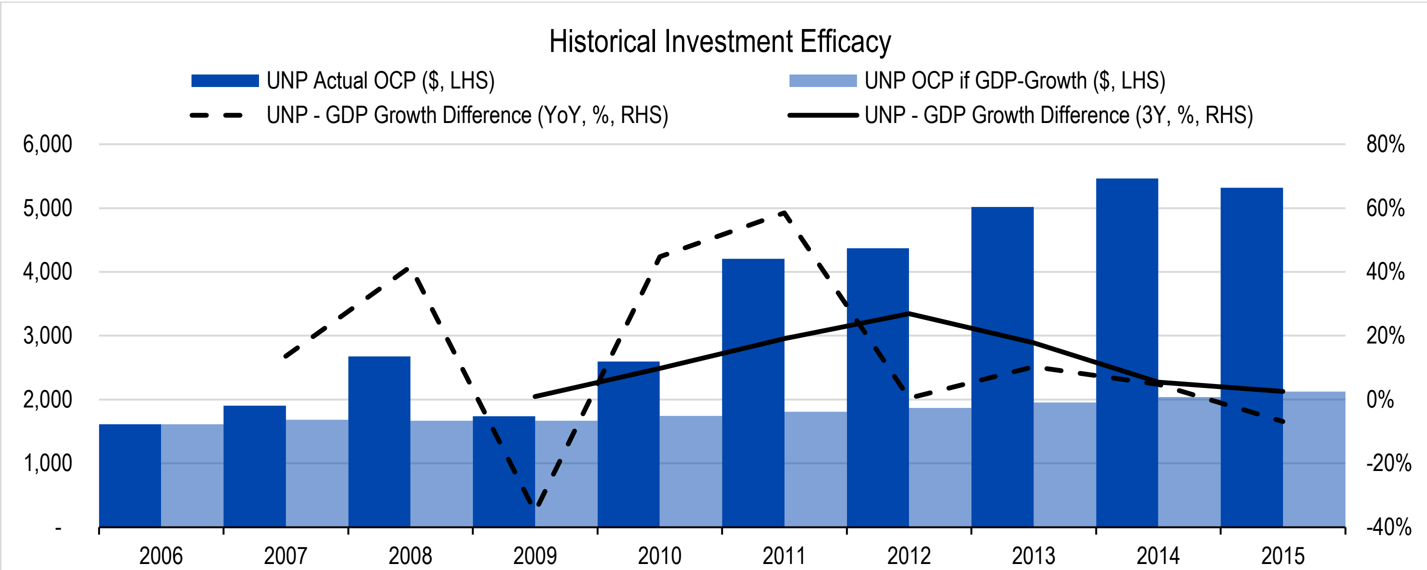


Figure 9. Source: Company Statements, Bureau of Economic Analysis, IOI Analysis

The dotted line hitting the 40% mark in 2008 and the 60% mark in 2011 would, in another company, indicate the enormous efficacy of UNP's investment program. While UNP's investments represent an important efficiency driver, we believe the rapid profit growth has more to say about the regulatory environment and the pricing power UNP has been able to exert over its customers. Over the past few years, the difference between UNP's profit growth and growth in nominal GDP has slowed, and we expect this trend to continue over the medium term (years 6-10 of our analysis).

Free Cash Flow to Owners

Free Cash Flow to Owners (FCFO) is the metric IOI uses to value companies. It equals Owners' Cash Profits less Net Expansionary Cash Flow.

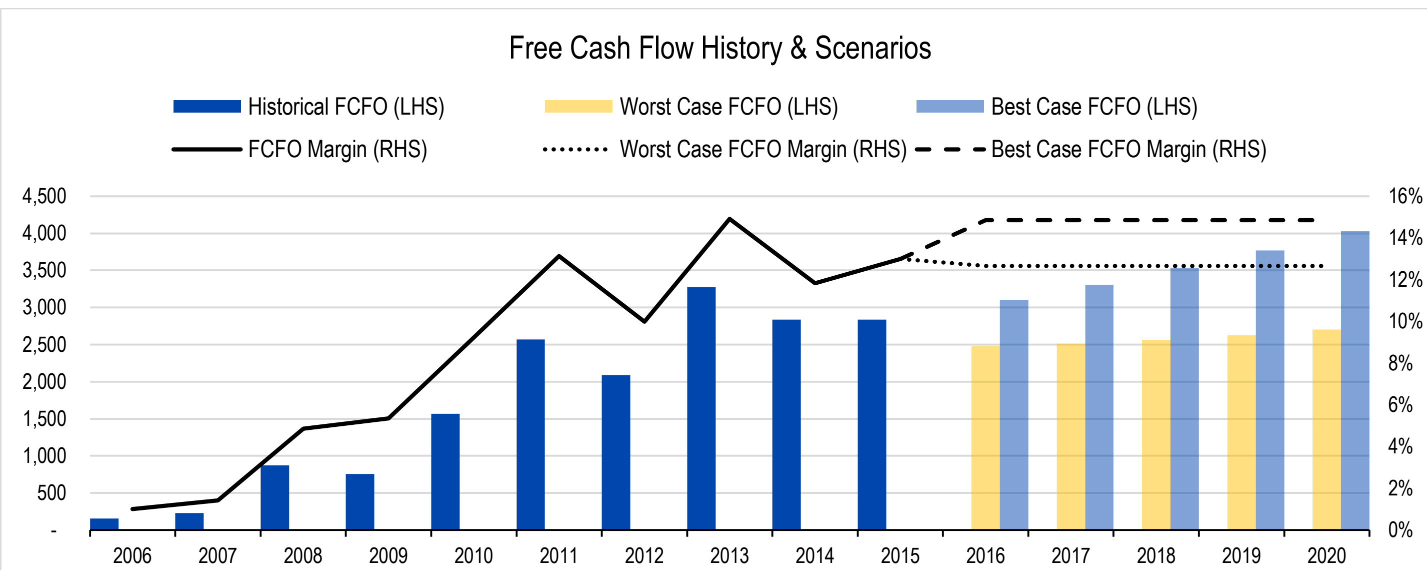


Figure 10. Source: Company Statements, IOI Analysis

Our worst-case assumptions generate a FCFO margin of 12% – one percentage point lower than the median of UNP's most recent five years' FCFO margin.

Valuation Waterfall

Revenue Growth

Falling volumes in Coal and the likely reduction in Intermodal business tempers our near-term assumptions for revenue growth. The upward resetting of legacy contract pricing is mostly complete, so there is likely to be little added boost from price increases. On the other hand, to the extent that the US economy continues to improve, the demand for shipping is likely to increase.

Profitability

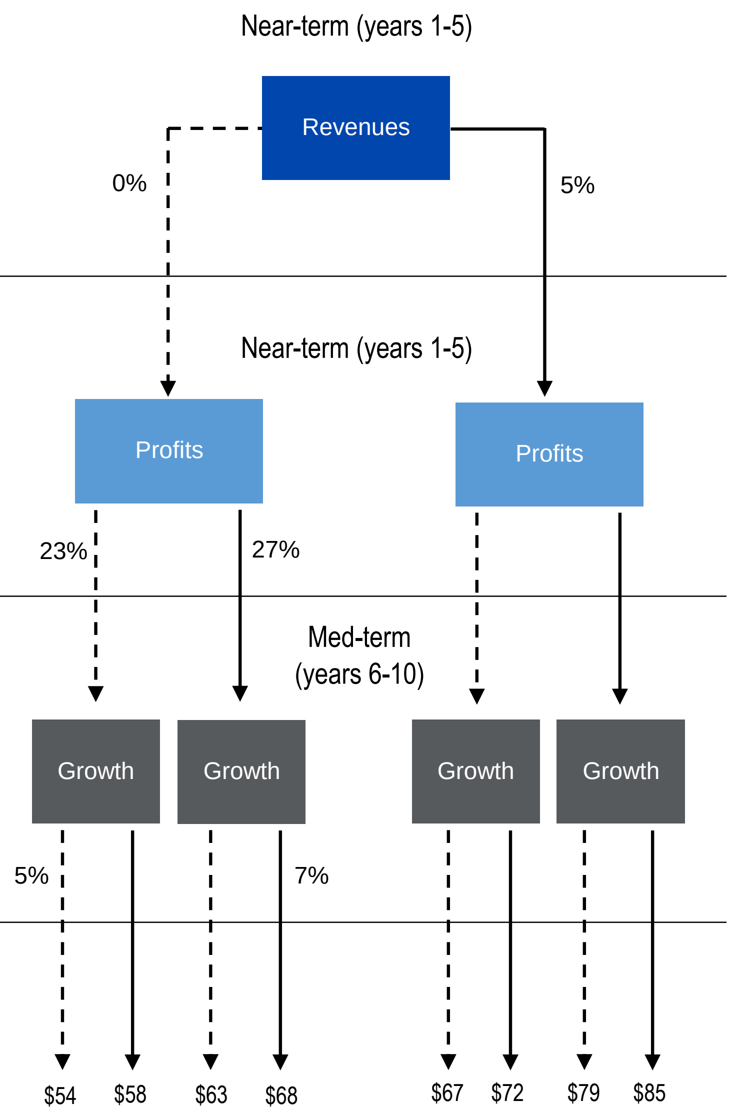
We have boosted our best-case profitability scenario to account for the reversal of the accelerated depreciation rules discussed in the commentary to figure 8. Barring some change in regulatory environment, we believe UNP's OCP margin will remain in the mid-20% range.

Medium-Term Cash Flow Growth

In the medium-term, we think the most likely cash-flow growth rate is likely to be about what our long-term assumption is for nominal GDP growth – 5% per year. The firm may be able to generate cash flow growth that is quicker than nominal GDP in the medium term, especially in a scenario in which near-term conditions are weak but bounce back in the mid-term.

Fair Value Range

Our fair value range extends from $54-$85 / share. We do not have basis to believe one scenario is more likely than another. At a lower discount rate than our standard 10%, UNP's share would appear fairly- or even under-valued. We prefer to maintain our standard discount rate yardstick and would not consider a bullish investment until the shares were roughly half of what they trade for now.



Methodology

IOI analyses focus on three main valuation drivers: revenue growth, profitability, and medium-term cash flow growth. We estimate a best- and worst-case scenario for each of these drivers resulting in a total of 2^3 = 8 fair value scenarios based on discounted cash flow methodology. Profitability is measured by Owners' Cash Profit (OCP) margin. We use a discount rate of 10% for large capitalization stocks.

A wide spread of lowest and highest fair values indicates a firm whose value is uncertain. Risk depends on the stock price's relationship to the valuation range.

Best-case scenarios are represented with a solid line; worst-case scenarios, with a dotted one.

Options involve risk and are not suitable for all investors. For more information, please read the Characteristics and Risks of Standardized Options.

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