

# Valuation Waterfall

## Revenue Growth

Our present revenue growth assumptions are based on a statistical analysis of Union Pacific's historical revenue growth rates. We consider even our worst-case assumptions to be much too bullish due to a variety of factors discussed in this report. Union Pacific's revenues have been aided by an enormous consolidation in the industry. We are modeling this company as though that enormous consolidation will happen again – it won't.

## Profitability

Our profitability assumptions are unchanged from our April 2016 forecasts as we see no reason to change them. Actual 2016 profitability was very high, but we believe this is due to the company's managers preparing for a difficult operating environment in the near term. See our comments regarding working capital management and investment spending in the appropriate sections later in this report.

## Medium-Term Cash Flow Growth

Union Pacific's historical cash flow growth has been very high, thanks to industry consolidation and reduced regulatory pressure. We see evidence that its investment projects in the 2010-2011 time period are generating much less bang for their buck than those projects started in the 2006-2007 timeframe. This trend is likely to continue, in our opinion.

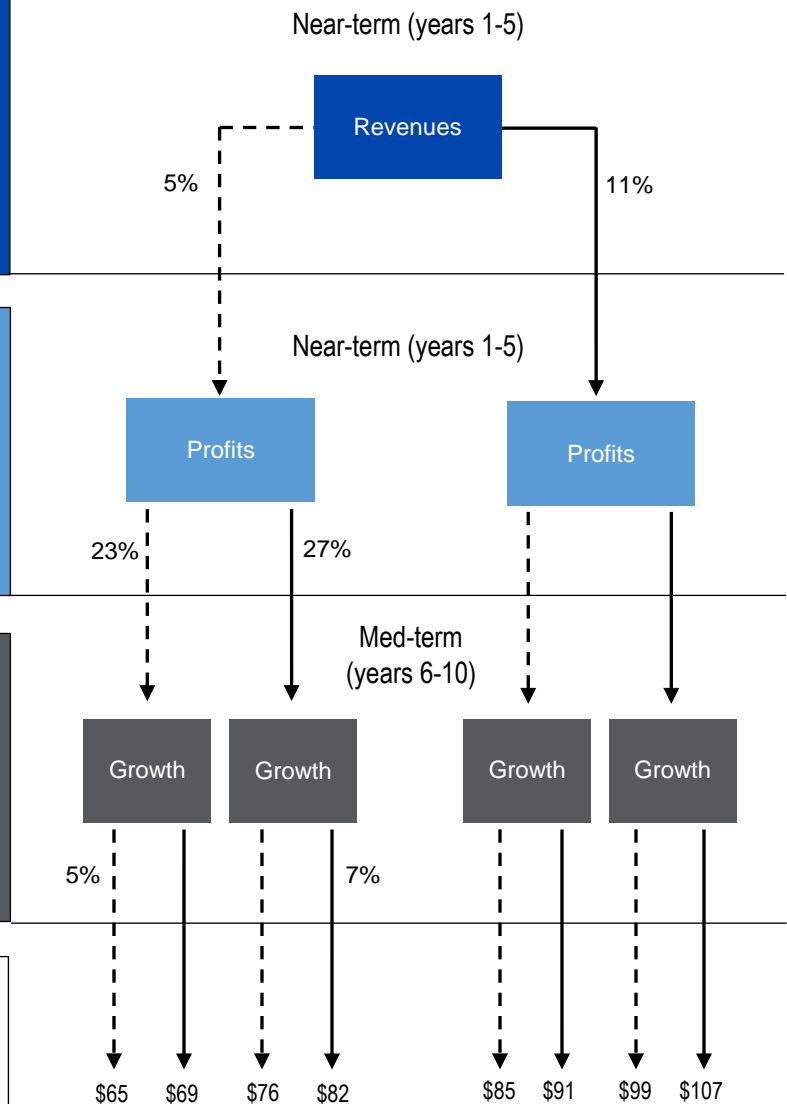
## Fair Value Range

We believe this fair value range is too high and the scenarios represent a stress-test of our April 2016 model. Our April 2016 view on the demand environment and revenue growth appears to be on target. Our 2017 valuation is designed to see how far we could stress credulity with our operating assumptions, then see what kind of valuation range those assumptions implied. This is it.

## Methodology

Framework Investing 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.



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