

Valuation Waterfall

Revenue Growth

Core business is US Construction & US Energy. US Construction grew by around 3% from 2Q16 to 2Q17 and Energy by around 10%, driven by equipment for shale gas extraction. Latin American and Asian demand is also bouncing back, and the firm has guided for a robust revenue growth during full-year 2017. The averages shown here include a worst-case growth of 10% in 2017 and a best-case of 20%.

Profitability

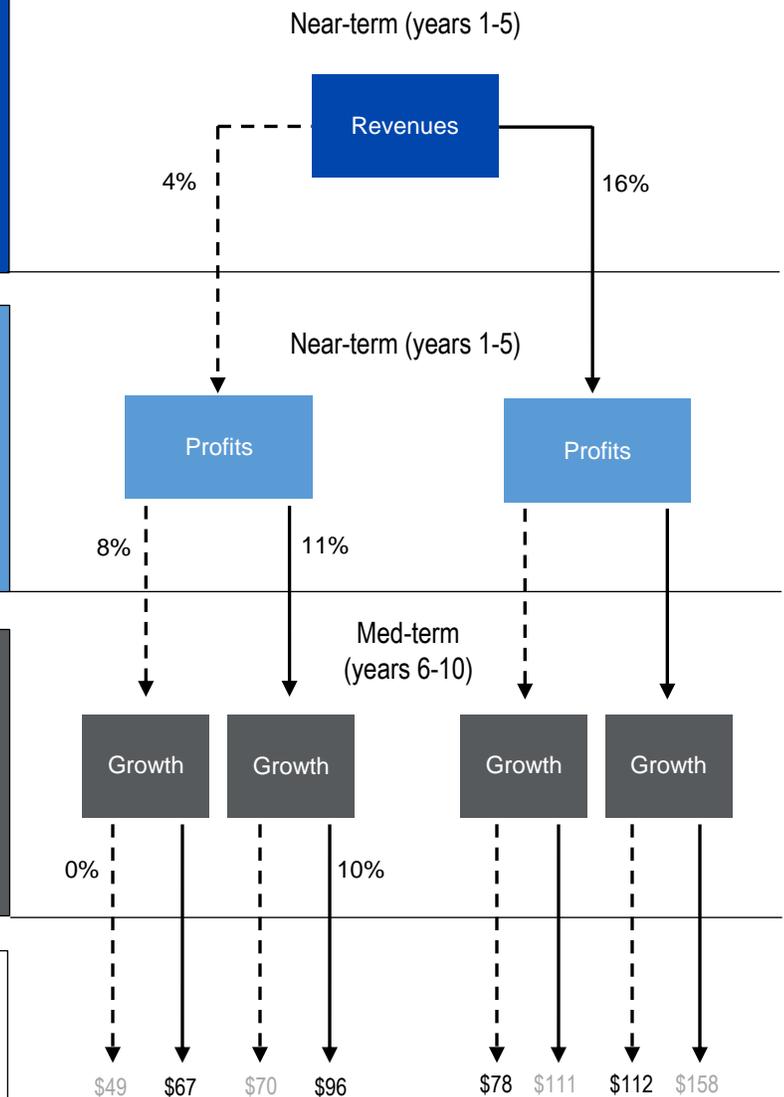
Caterpillar management's ability to manage profitability (measured on an OCP basis) is truly impressive. Even through some terrible downturns like the one at present, OCP margin hugs 8%. Considering that CAT's business depends on commodity demand and government policy – two very fickle drivers, we are impressed at the constancy at which it generates profits.

Medium-Term Cash Flow Growth

Attempting to forecast commodity prices and infrastructure demand five years in the future is folly. We look at two scenarios from a statistical perspective. Caterpillar profits have historically reached a plateau and bounced around that plateau for some time. If near-term growth is fast, medium-term is likely to be slow and vice versa. Our mean-reversion assumption is wrong if we're at end of supercycle.

Fair Value Range

Our fair value range extends from \$67 to \$112 / share and excludes scenarios where short-term revenue growth is followed by medium-term FCFO growth in the same direction. We believe the present stock price reflects the market's opinion that 1) near-term revenue growth and profitability is likely to be high, and that 2) medium-term growth is likely to mean revert to a lower level after the near-term boost.



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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