

How Does Your Business Grow? The Importance of Growth Assumptions in Delaware Appraisal Rulings

Michael Cliff and **Joseph Maloney** — 5 MIN READ

In valuation disputes, adjudicators critically examine the methods and assumptions used by opposing experts when estimating a business's future value.

An important input to many valuations for disputes in the Delaware Court of Chancery is a business's terminal value – the future value of a business that reflects all of the cash flows expected to occur *after* the period for which management or analysts typically prepare cash flow projections. Different methods can be used to calculate the terminal value, which can lead to divergent estimates among experts in these cases.

Analysis Group Managing Principal **Michael Cliff** and Vice President **Joseph Maloney** explored this topic in **an article published by the American Bar Association's *Business Law Today***. In this Q&A, the article's authors explain how the assumptions underlying such calculations affect the valuation results when employing different valuation methodologies.

Your article points out that the Delaware Court of Chancery has accepted different approaches for calculating terminal values in different valuations. Why is that important for the parties involved in a valuation dispute?

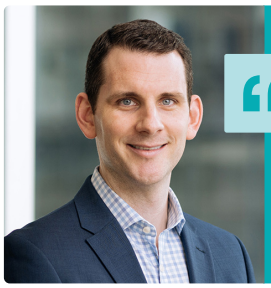
Dr. Cliff: In a typical discounted cash flow (or DCF) model, the terminal value accounts for a meaningful portion of the subject company's value. One popular valuation treatise presents industry examples where the terminal value represents 56% to 125% of firm value. Differences in approach and seemingly small disagreements about the assumptions that valuation experts use as inputs can produce large discrepancies in the experts' terminal value calculations.

In *Ramcell vs. Alltell*, for example, the Chancery Court noted that the petitioner and the respondent presented "vastly different" valuations, and that "the disparity in the experts' valuations are attributed to their sharp disagreements over the inputs to the DCF model and how they should be calculated."

Why is it difficult to calculate terminal values?

Mr. Maloney: Simply put, a terminal valuation calculation depends on a number of judgments and assumptions, and experts will need to justify their judgments and assumptions so that they hold up to scrutiny. The terminal value typically reflects the value of cash flows estimated to occur *after* periods for which there are explicit projections from company management or third parties. That means that the valuation expert preparing a DCF model needs to make assumptions about the profile of long-term cash flows, including revenue growth rates, profit margins, tax rates, and reinvestment needs.

A related challenge is that reliably calculating terminal value generally requires the subject business to have reached a "steady state" in its financial performance, where expected growth and profit margins are stable and sustainable, and the fraction of profits that is reinvested is sufficient to support the assumed growth.



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But financial projections prepared by company management in the ordinary course of business typically only extend a few years into the future and may be informed more by current conditions or historical performance than by long-run, steady-state conditions. The valuation expert thus has to think very carefully about constraints on inputs to the terminal value calculation that are likely to be present in the long term, even if not currently.

Some approaches for calculating terminal value require experts to make explicit assumptions about these inputs, while other approaches reflect these assumptions implicitly. In either case, the court will critically evaluate the assumptions used in deciding which valuation (if either) to accept.

What are the primary differences between the two approaches you write about, the extrapolation method and the convergence method?

Dr. Cliff: The extrapolation approach and the convergence method are two different ways of succinctly forecasting a business's cash flows in perpetuity and determining their present value. They differ primarily in how the cash flows are projected.

As the name suggests, the extrapolation approach generally involves extrapolating from a finite set of projected cash flows. An expert applying the extrapolation approach will generally assume that cash flows occurring after the forecast period grow at a constant rate forever.

Cash flows equal after-tax profits less investment, so extrapolating in this way assumes that both after-tax profits and investment grow at the same constant rate forever, and implicitly assumes that the percentage of after-tax profits that is reinvested – that is, the "investment rate" – is constant forever. When that investment is too low in comparison to the growth in cash flows assumed, this will produce an implausibly high return on investment.



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>
> MICHAEL CLIFF

Mr. Maloney: The convergence approach, by contrast, recognizes that extrapolating a constant investment rate from available projections may not always be appropriate. This is especially true when the level of investment in company-provided projections is lower than would be sustainable in the long term.

A valuation expert applying the convergence approach addresses this problem by growing *profits* – not cash flows – at a constant rate and tying investment to the assumed growth rate so that higher growth requires higher investment. The result is that the business's return on investment will slowly converge, as the name suggests, to a target rate over time.

In competitive markets, the expert might assume the return on investment converges to the cost of capital, so that extra growth ultimately does not create extra value. In other words, the expert assumes that there will come a time when the cost of incremental investments will exactly offset the returns from those investments.

If an expert applies the convergence approach in such a way that extra growth does not create extra value in the long term, is that the same as assuming zero growth in profits?

Dr. Cliff: No, and this is an important subtlety. The convergence approach explicitly distinguishes between growth and value creation.

When an expert applies the convergence approach in such a way that the return on investment converges to the cost of capital, growth's *effect on value* is neutral, but that is not the same as assuming zero growth. This fits intuition: Growth should only add value when a business grows into "good" investments, but growing into "bad" investments should actually reduce value.

Assuming growth has a neutral affect on value may be appropriate in competitive markets where obviously value-creating investment opportunities may be difficult to find. And, absent capital constraints, a firm should have already undertaken all available value-creating projects. In that case, growing faster (or slower) would actually reduce value.

Is projecting investment many years into the future a unique challenge for experts applying the convergence approach?

Mr. Maloney: Projecting any measure of financial performance in perpetuity is challenging, and that is certainly true for projecting a firm's investment. But this challenge is not unique to the convergence approach. Other techniques for calculating terminal value, like the extrapolation approach, also reflect an assumption about investment over the long term.

The difference is that the assumption about investment is explicit under the convergence approach, whereas it is implicit under the extrapolation approach. Making the assumption explicit offers some advantages insofar as it facilitates making sure that projected investment is appropriate in light of expected long-run economic conditions. ▪