

Financial Valuation *and* Litigation Expert

IEWS AND TOOLS FROM LEADING EXPERTS ON VALUATION, FORENSIC/FRAUD AND LITIGATION SERVICES



Editor's Outlook

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First, let me thank our loyal readers for their overwhelming support of the new VPS Q&A Guide. I'm so appreciative of your kind comments and enthusiasm for what has been a true labor of love for Jay E. Fishman, Shannon Pratt, and me. It's been challenging to round up all of the most popular BV questions we've been asked over the years and to then corroborate on answers.

Our front-page article in this issue deals with a dichotomy—both the simplicity and complexity of the capitalized cash flow method of the income approach. As always, we try to break it down for our readers to make it easy to understand. As always, I appreciate any comments or feedback you may have!

Next up, Ray Rath takes a look at deferred revenue valuation for accounting standards codification (ASC) 805. He uses a simple example to demonstrate the key concepts associated with deferred revenue valuation.

Chris Hamilton examines how analysts make adjustments to net income to arrive at a long-term cash flow available to the equity benefit stream. He explains that there is a "curious pattern that the 'permanent' cash flow used to value closely held

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BEST PRACTICES: The Capitalized Cash Flow Method

"Technical skill is mastery of complexity, while creativity is mastery of simplicity."

~ Sir Erik Christopher Zeeman, British mathematician

This quote sums up the capitalized cash flow (CCF) method of the income approach. The simplicity is there; divide one number by another number. However, there are many complexities both in the numerator and the denominator. So, let's see if we can master some of those complexities and present them in a simple manner.

In this article we will present the following topics on the CCF method:

1. Mid-Year Convention vs. End-of-Year Convention
2. Depreciation and Capital Expenditures
3. Using Cash Flow vs. Net Income

4. Direct-to-Equity vs. Invested-Capital Models

MID-YEAR CONVENTION VS. END-OF-YEAR CONVENTION

The mid-year convention is a simple way to reflect the fact that most businesses earn profits and cash flow throughout the year and not at the end of the year. While it is commonly used in discounted cash flow (DCF) models, it is not as commonly used in the CCF model. The correct formula for the mid-year convention for a CCF model is as follows:

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Benefit Stream Error: Locking in Adjustments for an Eternity

In most business valuations, two elements drive value and are the focus of attention. One is the risk rate. The second element, and the focus of this article, is the benefit stream.

Whether using the capitalization of earnings methods or the discounted future earnings methods, adjustments to net income are usually made to arrive at a long-term cash flow available to equity benefit stream. This transition is made to the benefit stream to match it with the after-tax cash flow to equity risk rates derived from public company data. It is a curious pattern that the “permanent” cash flow used to value closely held businesses is often substantially different from the starting point of the analysis – net income. In the valuation of most small closely held companies, this should be considered carefully, as it might signal an error.

Before exploring the potential problem, there are two foundational principles to consider. The first is the reality that over a long period (a million years!) there is no difference between the cumulative cash flow available to equity and cumulative net income available to equity. There are temporary timing differences along the way but no permanent differences. To illustrate, it is perhaps easier to think about a lot less than a million years. If a business started on January 1, 2010, and terminated on December 31, 2015, cumulative net income must, and always will, equal the total cash flow available to equity over the life of the business.

The second foundational principle that forces us to think in terms of a million years is the premise of value. For most fair market value engagements, the premise of value is “going concern.” This premise assumes that

the business will always exist. It is one of the more startling assumptions underlying our work when compared with “the real world.” I doubt any business owner expects the business to live forever, but that is exactly what we assume when valuing the business. A going concern for valuation purposes is actually longer than a million years; it assumes eternity.

The reality of the going-concern premise and the convergence of net income and cash flow should impact how adjustments to convert net income to cash flow are considered. The most common adjustments reflect the effects of non-cash transactions, working capital fluctuations, the acquisition or reduction of debt, and capital asset purchases and sales (CAPEX). Within those adjustments is found some of the reasoning why historical data are insufficient for projecting future performance in a valuation engagement. For example, there may be unusual capital investment in the near future, or unusual (increasing or decreasing) debt activity anticipated.

But, what about the terminal value? Whether using a single-sum benefit stream in the capitalization of earnings approach or when calculating a terminal value in a discounted cash flow method (DCF), it is, unfortunately, common to see short-term differences between net income and cash flow carried over to that single sum and, therefore, locked in forever.

When the practitioner simply grows the final-year projection by the terminal growth rate and then capitalizes it to determine the terminal value, all the adjustments in that final year are baked into the “eternal” benefit stream. For example, think about the implications if that final-year projection included an adjustment for debt



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reduction of \$100,000 where total debt for the subject company is \$2,000,000. That would mean that for the first 20 years (ignoring growth) the expectation is that the subject company will reduce debt. And for the rest of eternity, negative debt grows by \$100,000 per year? In this example, equity has probably been undervalued.

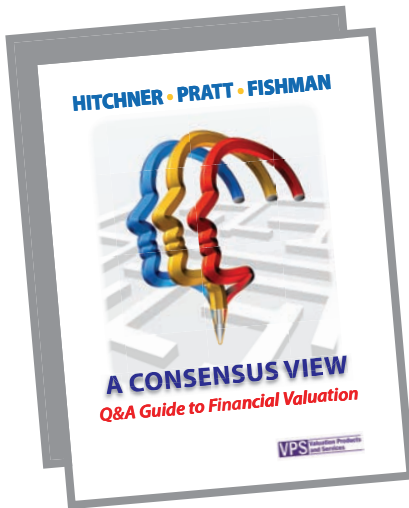
Analyzing the differences between cash flow and net income for the subject company is an indispensable exercise when used properly. When analyzed improperly it can cause significant problems with the conclusion of value. The following are thoughts to consider in that analysis:

- Differences between net income and cash flow available to equity in the historical period for which the practitioner has financial data helps to develop an understanding of the economics and cycles of the business and may facilitate the disclosure of non-operating and non-recurring transactions.

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expert TIP

Over a long period (a million years!) there is no difference between the cumulative cash flow available to equity and cumulative net income available to equity. There are temporary timing differences along the way but no permanent differences.



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- In addition to non-linear growth in revenue, analysis of management's expectations related to non-cash items, capital expenditures, working capital, and debt generally explain the reasons a DCF method (projected) should be considered rather than a capitalization (historical) approach. In some cases the whole reason a DCF method is being used is because of non-linear trends in these factors. Operating cash flow expectations might be linear, while short- to mid-term capital investing, working capital, or debt financing activity may vary materially.
- When using the DCF method, simply taking the last projection year and capitalizing it to arrive at the terminal value makes all adjustments in the final projection year permanent. This might not be incorrect in every case, but the valuation report should reconcile those imbedded adjustments with the implications of the premise of value.
- Where a capitalized cash flow method is used, cash flow adjustments must all be permanent (non-operating, non-recurring). If they are not, consideration must be given whether the adjustments should be made and/or whether the practitioner may be forced to use a DCF method to address those non-permanent fluctuations.
- Adjusting a multiple (market approach) or a risk rate (income approach) to convert it from a cash flow rate to an income rate is a dangerous exercise. This has the same effect as making permanent adjustments to the benefit stream. Such an adjustment establishes a permanent difference between cash flow and net income whether the valuator intends that, or not.
Adjustments to the benefit stream, or risk rate, to reflect differences between net income and cash flow available to equity should be considered carefully. Decisions that make those adjustments permanent are improper and could lead to erroneous conclusions. *SN*