

American Society of Appraisers Business Valuation Committee Special Topics Paper #3 The Use of Management's Prospective Financial Information by a Valuation Analyst^a

According to AICPA Professional Standards: AT Section 301 Financial Forecasts and Projections, “financial forecast is the prospective financial statements that present, to the best of the responsible party’s knowledge and belief, an entity’s expected financial position, results of operations, and cash flows. A financial forecast is based on the responsible party’s assumptions reflecting the conditions it expects to exist and the course of action it expects to take.” In order for a valuation analyst to objectively perform the valuation analysis, the analyst has to judge whether or not management’s prospective financial information is reasonable and can be relied upon in the valuation analysis. This white paper will focus on the valuation analyst’s role in using management’s forecast financial information and suggest a few useful analytical tools available to the valuation analyst.

Introduction

Business valuation is the process of determining the economic value of a business entity, which is based on the ability of the business to generate future cash flows. One common method used in estimating the value of the entity, the discounted cash flow (DCF) method, utilizes free cash flow expected in the future and discounts those prospective cash flows at a risk-adjusted rate to arrive at a net present value of or for the business. The DCF method is particularly useful when future profit margins and growth are expected to vary significantly from historical operating results.

The two common components of the DCF method are:

- an estimate of future cash flows, and
- an estimate of an appropriate risk-adjusted required rate of return used to discount the estimated future cash flows back to net present value.

The credibility of the DCF method lies in both a reliable forecast and a well-developed discount rate. Much has already been written about discount rate development. This white paper will focus on the valuation analyst’s role in using management’s forecast financial information.

^aThis white paper is for education purposes and should not be considered as authoritative. It has been provided for discussion of a concept and is not being offered as professional advice. Each set of circumstances may require a different analysis to be performed.

Management’s Prospective Financial Information (PFI): Difference between a Forecast and a Projection

Even though forecast and projection are used interchangeably by valuation analysts, they are actually different concepts in accounting literature.

According to AICPA, “financial forecast is the prospective financial statements that present, to the best of the responsible party’s knowledge and belief, an entity’s expected financial position, results of operations, and cash flows. A financial forecast is based on the responsible party’s assumptions reflecting the conditions it expects to exist and the course of action it expects to take.”¹

“Financial projection is the prospective financial statements that present, to the best of the responsible party’s knowledge and belief, given one or more hypothetical assumptions, an entity’s expected financial position, results of operations, and cash flows. A financial projection is sometimes prepared to present one or more hypothetical courses of action for evaluation, as in response to a question such as ‘What would happen if...?’ A financial projection is based on the responsible party’s assumptions reflecting conditions it expects would exist and the course of action it expects would be taken, given one or more hypothetical assumptions.”²

¹American Institute of Certified Public Accountants, AICPA Professional Standards, “AT Section 301 Financial Forecasts and Projections.”
²Ibid.

Based upon AICPA guidance, a forecast is what is expected to happen, whereas a projection is what might happen given certain hypothetical assumptions. For example, if the subject company has a mature and stable business, its historical performance may be a good indicator of its future performance. Management's PFI is a forecast because there are no hypothetical assumptions. If the subject company is an early-stage company without any revenue, its future performance depends on a variety of factors, such as key patent approval, a new round of financing, and success of its marketing plan, in which case management's PFI may be a projection because the PFI relies on various hypothetical assumptions. The valuation analyst should understand the distinction between a forecast and projection.

Professional Standards on PFI

To understand the valuation analyst's role in using management's PFI, it is important to understand the ASA's position on this issue in valuation professional standards. Standard BVS-VIII: Comprehensive Written Business Valuation Report broadly specifies that, "If projections of balance sheets or income statements are used in the valuation, key assumptions underlying those projections must be included and discussed."³

USPAP does not provide specific guidance on use of management's PFI in a business valuation. However, in Statement on Appraisal Standards No. 2 (Real Property), USPAP states:

"To avoid misuse or misunderstanding when DCF analysis is used in an appraisal assignment to develop an opinion of market value, it is the responsibility of the appraiser to ensure that the controlling input is consistent with market evidence and prevailing market attitudes. Market value DCF analyses should be supported by market derived data, and the assumptions should be both market and property specific. Market value DCF analyses, along with available factual data, are intended to reflect the expectations and perceptions of market participants. They should be judged on the support for the forecasts that existed when made, not on whether specific items in the forecasts are realized at a later date."⁴

In general, a valuation analyst (in a broad sense) should make a determination of whether or not the PFI prepared by management is reasonable for use in performing a valuation.

Assessing this information for reasonableness means that a valuation analyst should not simply accept management's PFI without understanding the assump-

tions made in the PFI. The ASA's professional standards suggest that the valuation analyst should understand the nature of management's forecast and the underlying assumptions and discuss them in the valuation report. It is good practice for the valuation analyst to understand how and why the PFI is prepared and determine the reasonableness of the assumptions. Understanding the assumptions behind management's PFI increases the credibility and reliability of the valuation.

Role of Valuation Analyst

In order for a valuation analyst to objectively perform the valuation analysis, the analyst has to judge whether or not management's PFI is reasonable and can be relied upon in the valuation analysis. The first step in understanding management's assumptions is determining whether the PFI was prepared using a top-down approach or a bottom-up approach.

A top-down PFI starts with a business assessing the market as a whole. First, management estimates the current market size available for their business and factors in relevant sales trends. From that, management can then identify their own company's target sales. The assumption is that, given the existing market and potential market growth, the company can expect to capture a certain percentage share of the market in subsequent years.

Conversely, a bottom-up PFI is a detailed budget typically developed from spending plans by various groups within the company. The bottom-up approach is grounded in the product or service itself, from which a PFI is made based on what the company needs to get its offering to the market (i.e., things like how many employees the company has, how many factories it can open, or how many clients it can attract). Also known as an operating expense plan, bottom-up PFI examines factors such as production capacity, department-specific expenses, and addressable market in order to create a more accurate sales forecast.

While it is clear that both top-down and bottom-up forecasting techniques have their advantages, the best model may ultimately depend on the nature of the specific business. Firms that experience little deviation in cash flow from one month to the next may benefit from a top-down PFI model. Additionally, top-down models can be effective for startups that do not have any accumulated sales data. On the other hand, bottom-up forecasting may be ideal for a seasonal business that experiences significant variation in cash flows throughout the year.

In summary, top-down models start with the entire market and work down, while bottom-up PFIs begin with the individual business department and expand out. Understanding the pros and cons of both types of financial forecasting is important for the valuation analyst

³American Society of Appraisers, ASA Business Valuation Standards.

⁴The appraisal foundation Uniform Standards of Professional Appraisal Practice.

so they can assess the reasonableness and credibility of management's PFI.

In addition to understanding the approach management used to develop the PFI, a valuation analyst should understand who actually prepared the PFI to consider any potential biases. For example, if the marketing and sales department prepared the PFI, is it potentially too optimistic? Conversely, if the finance and accounting department prepared the PFI, is it too pessimistic? Typically, the greater amount of time and company personnel dedicated to the forecast planning process, the more detailed and accurate the forecast will be. Additionally, if the valuation analyst has access to previous forecasts prepared by management, the analyst should compare the previous forecasts to actual results to consider the accuracy of management with those PFI reports.

The valuation analyst should also understand the fundamental assumptions that drive the forecast. If the assumptions in the PFI prepared by management are not readily apparent, the valuation analyst may consider asking questions of management regarding the underlying assumptions.

Examples of questions that the valuation analyst may consider in understanding the assumptions behind the PFI include:

- Is expected growth in revenue due to an increase in price or volume or both?
- How does expected growth in revenue of the company compare to industry growth?
- Is revenue growth achievable given the current conditions of company operations?
- How are new products or services considered in forecasted revenue? If so, are corresponding expenses reasonable?
- Are new products under development? What is the basis for research and development expenses? Are forecasted capital expenditures consistent with the revenue growth assumptions?
- Are operating expenses consistent with historical levels? Did management differentiate between fixed and variable costs?
- If there are variable costs, what do costs vary against?
- Are forecasted results consistent with historical results? If not, why?
- In a business combination, do the forecasts consider any synergies from revenue enhancement and/or cost savings?
- Is it reasonable for management to forecast a much higher or lower growth rate compared to guideline companies or other industry metrics?

- Is it reasonable for management to forecast a much higher or lower profit margin compared to guideline companies or other industry metrics?

A good benchmark with which to evaluate the reasonableness of management's PFI is industry data. The valuation analyst should compare the subject company's historical performance and management's PFI to those of the guideline publicly traded companies. Comparison with guideline publicly traded companies can also provide the valuation analyst with detailed industry information, such as normalized working capital level, average industry growth rate, and average capital expenditures. In addition, the valuation analyst might research market and industry research reports and relevant government data as additional information to determine whether or not the PFI is reasonable for use in a valuation.

Furthermore, when utilizing more than one approach in valuation, if the valuation results from use of the PFI are significantly different from other valuation methods, it may be good practice to reevaluate the reasonableness of management's PFI.

What if Management Doesn't Prepare a PFI?

In certain circumstances, management may not prepare a PFI. In those circumstances, a PFI may be available from other sources, such as the company's outside financial advisors. If the subject company is a public company, equity analysts may prepare prospective information in research reports. The valuation analyst should consider reconciling multiple sources of PFI in preparing for valuation analysis.

Occasionally, there is no PFI available to valuation analyst. This is particularly common when dealing with small, privately held companies. In these circumstances, the valuation analyst may ask management to develop the PFI specifically for the valuation. In such case, management still ultimately takes responsibility for the PFI.

If management prepares a PFI, but a valuation analyst finds management's PFI to be unreasonable, the valuation analyst should first make recommendations for any revisions in the PFI to management. Otherwise, the valuation analyst should consider any additional risk in achieving the PFI company-specific risk premium in the cost of capital to perhaps capture any additional forecast risk. If the valuation analyst finds that management's PFI is not reasonable for use in the valuation, the analyst may also consider using only valuation methods that do not require the use of PFI. In these situations, a valuation analyst may consider making clear in the analysis the limitations of the data available for the analysis. In

extreme circumstances, the valuation analyst should consider resigning from the engagement due to lack of appropriate data.

Finally, it may be good practice for the valuation analyst to have representations that the PFI provided to the valuation analyst is management's best estimate of expected future performance of the company through a management representation letter. Management representation letters are commonly used by third-party auditing firms in their financial reporting engagements.

Analytical Tools

Whether the goal is to evaluate the reasonableness of management's PFI or to assist management to prepare for a PFI, there are a few useful analytical tools available to the valuation analyst. It is common for historical results to be used as a starting point in any forecast. One way to statistically evaluate PFI is for the analyst to perform a regression analysis comparing the company's historical financial performance to certain economic indicators. One key to this approach is to identify the salient economic variable(s) that correlate with historical revenue. Once the trending line is fitted, it is much easier to forecast for the future.

Some business valuation analysts perform scenario analysis or sensitivity analysis when evaluating management's PFI. The analyst may consider utilizing three scenarios, such as best, worst, and neutral, representing management's optimistic, pessimistic, and status-quo outlook for the company to identify key value drivers in the PFI. Sensitivity analysis on specific assumptions is

another powerful tool that may be used by valuation analysts to understand the reasonableness of management's PFI.

Powerful analytical tools such as Monte Carlo simulation may be helpful in determining the reasonableness in using management's PFI in the valuation. Traditional DCF analysis is based upon single-point estimates of the variables. Monte Carlo simulation produces distributions of possible outcome values based upon distributions of underlying variables. Monte Carlo simulations calculate thousands of scenarios having different combinations of inputs. The simulation captures numerous "what-if" scenarios related to the company's future performance.

Summary and Conclusion

The valuation analyst should determine that any PFI prepared by management is reasonable for use in a valuation analysis. Assessing for reasonableness means that the valuation analyst should not simply accept management's PFI without understanding the assumptions made in the PFI. The ASA's professional standards suggest that the valuation analyst should understand the nature of management's forecast and the underlying assumptions and discuss them in the valuation report. Good practice dictates that the valuation analyst understand how and why the PFI was prepared and determine the reasonableness of the assumptions. Assessing reasonableness can take many forms, But determining the reasonableness of management's PFI increases the credibility and reliability of the valuation.