

**You Think You Have Problems?
Try Forecasting for a Smaller Business
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Most larger companies have trouble forecasting for any period beyond one or two years. They very often try to do a five-year plan, but it is frequently a work in progress than is updated on a regular basis. If they have trouble doing a forecast, how can you expect to get one for a smaller company?

Now, with that being said, there are many larger companies that can reasonably forecast its cash flow when sales are stable, profit margins are constant, and components of cash flow remain relatively stable from year to year. What did I just describe? Answer: a mature company. Shifting gears to smaller companies, I will use my firm as my example. We have the same number of staff each year billing the same number of hours. We have the same cost structure from year to year with the exception of the same inflation that we build into increases in our hourly rates. Our working capital and capital expenditures are reasonably consistent from year to year. What did I just describe? Answer: a mature company.

So, let's talk about forecasting.

Introduction

In theory, a discounted future benefits method is one of the best methods of valuing a company, large or small. It may not be accepted by some courts, however, because of its seeming reliance on forecasted future events. The values derived by these methods are only as accurate as the forecasts of future cash flows or earnings, and sometimes these future events cannot be forecasted with sufficient reliability to make them usable. Understanding that no forecast is ever able to be determined with total accuracy, these methods may be problematic in either of the following situations:

1. The valuation will be used by a client (or a judicial or regulatory body) that will not accept a value based on a discounted future returns method.
2. Insufficient data exists to make a timely, reliable forecast of net cash flow or earnings for a reasonable period into the future.¹

Forecast Versus Projection

Before I go on to discuss the forecasting process, it is important to differentiate between a forecast and a projection. Although these terms are often used interchangeably, the AICPA uses two distinct definitions to differentiate these terms. Since many business appraisers are also accountants, I thought that I should throw in a couple of definitions.

Financial forecast. 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.

Financial projection. Prospective financial statements that present, to the best of the responsible party's knowledge and belief, given one or more hypothetical assumption, 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 questions such as, "What would happen if...?"²

As the definitions indicate, the primary difference is that forecasts are based on the conditions expected to exist and the course of action the business expects to take, whereas projections are based on one or more hypothetical courses of action. Based on these definitions, forecasts are generally used in performing the discounted future benefits

¹ Jay E. Fishman, et.al, *PPC's Guide to Business Valuation*, 19th ed., vol. 1 (Fort Worth, TX: Thomson Reuters, 2011): 502.8.

² AT section 301, *Financial Forecasts and Projections* (AICPA, *Professional Standards*).

method. The remainder of my discussion will focus on forecasts necessary for completion of the discounted future benefits method.

Management's Forecast

If you are valuing a large company, a forecast may be obtained from management. If you are valuing a smaller company, more than likely the forecast will be prepared by the appraiser if the discounted future benefits method will be utilized. The forecast should represent what is expected to occur in the future based on existing operations and what is known or knowable at the date of valuation. Let's start off with the assumption that management has provided us with a forecast. Upon receipt of the forecast, a reasonableness check should always be performed. Whatever you do, do not blindly accept your own client's forecast.

I have seen the following scenario too often. The subject business has normalized earnings for the last five years as follows:

2007	\$178,000
2008	170,000
2009	180,000
2010	175,000
2011	200,000

Now, the client provides me with the forecast. Going through a divorce, the client forecasts that business is terrible, the industry is falling apart, and the business will never be the same. Therefore, the next five years look like this:

2012	\$180,000
2013	170,000
2014	150,000
2015	135,000

2016	125,000
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That poor, poor client! Now let's look at the information that the same client might give me if he or she was trying to sell the business. In this case, the forecast might be the following:

2012	\$225,000
2013	250,000
2014	275,000
2015	300,000
2016	350,000

Don't you just love this business? Where else can the same client give you such nonsense? Part of the role of being a good valuation analyst is to maintain an objective attitude, which includes recognizing that your own client may try to help you get to his or her desired end result by giving you bad numbers. Sometimes you will not be able to use this information, and you will be required to consider other valuation methods. However, don't roll over and play dead just because the job is difficult.

What does the appraiser do if he cannot agree on a forecast with management? Occasionally, there are instances in which the appraiser cannot accept management's forecasts, or vice versa. When this occurs, every effort should be made to reconcile the differences, assumption by assumption. If all efforts fail, at least five solutions are possible.

- A. Use management's forecast and label them as "Management's Pro Forma Forecasts." The fact that they are management's pro forma forecasts should be explained prominently in the text.
- B. Insist on using the consultant's forecast, perhaps with footnotes about management's disagreements with the forecasts.
- C. Use two or more scenarios for the forecasts, resulting in a range of estimated values.

- D. Use management's forecasts and adjust the discount rate. This is usually accomplished through the specific company risk adjustment.
- E. In extreme situations, the consultant should consider resigning from the engagement.³

I am not inclined to rely on management's forecast, particularly in a litigation assignment, if I do not agree with it. Labeling it as "Management's Pro Forma Forecast" will most likely not make a difference when the judge or jury rejects my opinion that is based on a forecast that I believe is incorrect. Even if I do not state my disagreement, chances are that the other valuation analyst will find similar problems with the forecast that I found and will be extremely vocal about it. Relying on something that you believe is wrong can only bring you to a bad place.

Although most valuation analysts do not wish to turn away an assignment, there are times when the forecast is so critical to the valuation process that it becomes impossible to proceed with the job. An example would be when the valuation is being performed for the purpose of obtaining financing.

Factors to Consider When Evaluating Management's Forecast

There are various factors the valuation analyst can consider when evaluating a forecast provided by management. Some of these factors include the following:

1. Company specific factors
2. Economic conditions
3. Industry trends

Company Specific Factors

When evaluating a forecast provided by management, the valuation analyst should first ensure that the forecast is consistent with the company's future growth prospects and

³ Fishman, et.al, *PPC's Guide to Business Valuation*, 502.16.

expectations. In addition, management's forecast should be compared to the company's actual historical financial results, when such information is available.

The information needed to gain a thorough understanding of a company's growth prospects can be obtained during the information gathering and management interview process. The valuation analyst should obtain as much information as possible related to factors such as the company's customer base, and capacity constraints.

An understanding of a company's customer base is essential for determining the reasonableness of management's forecasts. In some instances, the future outlook for a company's customer base can be used as the basis for the revenue forecast. For example, if management forecasts a "doom and gloom" scenario for the company, while the company's largest customers are forecasting growth in the near term, it may be improper to rely on management's forecasts.

The valuation analyst must also have an idea of the company's capacity constraints. In looking at the company's historical revenues, it may appear that the company has been achieving steady growth in recent years. In addition, economic forecasts reflect moderate economic growth well into the near term. Based on these factors, is it safe to assume that the company will experience moderate near term growth in line with the overall economy? This could possibly be the case if the company didn't have capacity constraints. If management states that with its current facility, equipment and labor force, the company can only generate a maximum amount of sales, a forecast reflecting continued growth over the next 10 years is unreasonable unless a certain level of additional costs needed to increase capacity are incorporated into the forecast.

In instances where the company has an operating history, management's forecast should be compared with the company's historical results. In addition, it would also be beneficial to obtain an historical budget versus actual report from the company in order to see how accurate the company's forecasts have been in years past and if they have historically

been overly aggressive or conservative. For example, if a company has continuously missed its forecasts by 30 percent or more, it may not be beneficial to place a lot of weight on management's forecasts for a valuation engagement.

A company's historical financial performance is often a good benchmark to use and should be analyzed to see if the company's forecasted growth, profitability, and financial ratios are in line with historical levels. If management's forecasts are not in line with history, the valuation analyst must find out from management why the company is expecting either improvements or declines in its operating performance.

There are some cases where the valuation or economic damages assignment involves an early stage company with limited or no operating history. In instances such as these, the valuation analyst must look to benchmarking data from either trade associations or the public market to determine if management's growth and profitability assumptions are reasonable. In addition, a sensitivity analysis may be appropriate to analyze the impact of changing the various assumptions in the forecast.

Economic Conditions

The valuation analyst should also consider how different economic factors, such as gross domestic product (GDP), inflation, interest rates, consumer confidence, etc. impact the demand for the subject company's products and services. If it is determined that the company is heavily dependent on the economic climate, the valuation analyst should ensure that management's forecast is consistent with the outlook for the economy.

Many of our valuations that were performed during the 2008 to 2010 time frame involved companies that were severely impacted by the global economic recession. In many cases, clients used this economic downturn as a means to justify bleak forecasts resulting in lower values. When evaluating management's forecast, the valuation analyst needs to have an understanding of what part of the economic cycle the country or world is in as of the valuation date. If the economy appears to be bottoming out, a forecast of continued poor

performance may not be reasonable as the company could potentially benefit from a moderate recovery.

Industry Trends

Industry trends should also be considered when evaluating a forecast provided by management. Industry factors can include the size of the market, demand drivers, the competitive environment, barriers to entry, and the maturity of the industry.

An understanding of the industry is of significant importance when valuing or performing lost profits calculations for companies with limited or no operating history. Often times I will receive a forecast from either management or an opposing expert in an economic damages litigation where the forecast results in the subject company easily penetrating an industry that is already saturated with companies that generate millions and in some cases billions of dollars in revenues. In addition, these companies have much larger advertising budgets, capital resources, and brand recognition than the subject. How realistic is it for a subject company with no brand recognition and an inexperienced management team to immediately enter a mature market with large companies that have already established a market presence and capture a 30 percent market share? This further stresses the importance of understanding the industry and its major players in order to better evaluate the growth potential for the subject company.

Presented below is a list from the American Society of Appraisers (ASA) of industry factors that the valuation analyst may need to consider in preparing a forecast:

1. Growth prospects for the subject company's industry at national and local level.
2. Demand factors
3. Maturity of the industry
4. Structure of industry and level of competition
5. Technological or economic obsolescence factors

6. Barriers to competitor entry⁴

Preparing the Forecast

Now let's assume that no forecast is provided by management or the forecast provided is not reasonable. What do you do? These facts alone do not relieve the appraiser of the responsibility of preparing a forecast on his or her own. In fact, corroborating this practice, the ASA included the following statement in its course materials:

Practitioner—If the subject company does not prepare forecasts, the appraiser may consider either working with management to prepare forecasts or independently preparing a forecast.⁵

The starting point of the forecast process is the analysis and adjustment of historical financial statements to reflect the economic income of the business being appraised. Some of the more common adjustments are as follows:

1. The inventory accounting method may be adjusted to conform to industry practice or expected future treatment. This could include a change in inventory accounting from last in, first out to first in, first out.
2. Depreciation may be adjusted to reflect current economic write-offs more accurately, based on the value determined by the machinery and equipment appraisers or real estate appraisers.
3. Nonrecurring items should be removed.
4. Nonoperating income or expense items may be eliminated, if appropriate.

⁴ BV202N, *The Income Approach*, (American Society of Appraisers Basic Business Valuation Course).

⁵ Ibid.

5. Related party transactions may need to be adjusted if the results are other than those that would be negotiated at arm's length.

Some of the normalization adjustments will be made regardless of whether the appraisal subject is a controlling interest or a minority interest. These types of adjustments would be those that affect the future benefit stream, particularly when the historical operations are expected to be different from the future operations. For example, a company may have incurred a hurricane loss in the past year that would not be expected to occur again in the foreseeable future. Certainly, as a valuation analyst, I do not want to start trying to forecast hurricanes. However, in certain parts of the world, this may be somewhat predictable.

Historical operating results should also be analyzed to gain an understanding of the quality of the earnings reported. The valuation analyst should also look for trends that may help predict the future with respect to the direction in which the company is headed. These trends may indicate growing, declining, flat, or volatile income streams. If a company has been growing at an exceptionally high rate, the likelihood is slim that the same rate will continue into the future. Because this rate cannot be maintained, the valuation analyst must compensate for it in the forecast by reducing the growth going forward.

If the company is declining, the terminal value may be calculated on the basis of liquidation, as opposed to that of a going concern. If a decline is forecast indefinitely into the future, the valuation analyst should consider whether the highest and best use of the business is in liquidation. If so, the business should be valued in this manner.

If the company's future appears to be flat, there is no reason to use a multi period valuation model; in this situation, a single period capitalization model will suffice. When a company's results are erratic, forecasts become extremely difficult and may have little value in the appraisal process. An averaging of history may prove to be beneficial, but this should be done only as a last resort.

Don't forget to use other information that was gathered from the company or through your own research. Customer contracts can help you forecast expected changes as a result of a customer's growth. For example, if you were valuing a trucking firm that had major contracts with large retail customers, your economic and industry analysis would become important in helping to forecast the trucking firm's growth.

The next question that the valuation analyst asks is, how far into the future should the forecast go? The forecast should go out far enough that it represents sustainable future levels of income for the company. If the company has been showing losses, the forecast should go out far enough to allow the company to return to a level of normal sustainable profitability. The same is true if the company has been making large profits. Go out far enough to reflect the normal conditions for the company. The idea is to go out beyond periods that contain the peaks and valleys that may be short-term. The willing buyer is going to be looking for the income stream that he or she can count on beyond the near term.

Another consideration related to the forecast period is that the forecast should go out far enough so that the business can get through a period of significant plant construction or expansion. If new products are being introduced, the forecast should extend to the point that the results of the new product's introduction can be understood. If a merger or acquisition is expected to take place or is in the process of taking place, the forecast should extend to the period after the combination is completed.

The anticipated rate of growth is the primary factor to be considered in how far the forecast should be continued. Stabilization is the goal to be achieved in the forecast period. This is frequently much more difficult than it seems. You will have to conduct a thorough analysis of the subject company, the economy, and the industry, if you hope to get reasonably close. Keep in mind that during the earlier years of the forecast, year-to-year growth can exceed the discount rate selected, but that cannot continue beyond the terminal year because the discount rate minus growth (capitalization rate) cannot logically be less than

zero. Can you imagine a willing seller paying the willing buyer to take the business off his or her hands? A negative discount rate would create this result.

A common error made among inexperienced valuation analysts who rely on computer software to assist with (or do) the forecast is to allow these programs to determine the period to be used in the forecast. Most software programs allow either a 5 or 10 year period to be used for a forecast. This may not be the correct period for a particular appraisal assignment. The facts and circumstances of each situation will be different and require a different forecast period. Do not depend on a software program to make decisions that require judgment!

In practice, the most common forecast period is five years. Some valuation analysts consider this period to be a normal business cycle, while others focus on Revenue Ruling 59-60, which suggests five years. There is no magic about five years. The period used can be two years, three years, seven years, or even longer. It is almost always difficult to forecast the future, especially if the future is many years forward.

Preparing forecasts is so dependent on individual characteristics that the standard business valuation literature provides little support on the actual mechanics involved. To accurately prepare a forecast will take adequate analysis, research, and documentation. Unfortunately, there is no quick or simple method. By taking your time and by applying common sense, a reasonable forecast can be prepared.

The process of creating a forecast can be broken down into a series of logical steps. First, the income statement must be forecast. The balance sheet is so reliant on the income statement that it becomes impossible to forecast the balance sheet first. After both the income statement and balance sheet are forecast, it then becomes possible to calculate net cash flow.

The actual process of forecasting is the same whether you are valuing a large or small company. I am going to provide you with some recommendations about forecasting but this is for information purposes only as I will not have time to cover it all in the oral discussion for this presentation, nor will you be able to do all of this for smaller companies.

The Sales Forecast

The forecast of the income statement must begin with the forecast of sales. Logically, how could you possibly determine cost of sales, variable costs, or taxes if you don't know what sales are? Sales are often the most important component of the forecast as nearly every number will rely on it. Obviously, the most time should be spent here.

Determining future sales will involve both qualitative and quantitative analysis. A series of questions must be answered. What has the company done historically? What are the growth trends? Are sales increasing or decreasing? Have there been any major changes (customers, products, facilities, etc.)? Is the company's growth similar to the industry? What is the outlook for the industry? How is the current economic climate impacting the company and the industry? These are only a few of the factors that must be addressed when forecasting sales.

When forecasting sales, the valuation analyst must first identify where the company is in its life cycle and how its product is positioned in the marketplace. Certain factors to consider when preparing a revenue forecast include the following:

- *Inflation.* Inflation should be considered in estimating future gross revenues. When current rates are extreme, relative to historical ranges, the expert should usually reflect gradual increases or decreases toward more normal rates during the forecast period.
- *Product demand.* Products typically go through a life cycle that includes four distinct phases: introduction, growth, maturity, and decline. In estimating future revenues,

the valuation analyst should consider the life cycle stage of the company's primary products.

- *Competition.* Within each industry, many companies often compete for a share of the market, and such competitive pressures must be considered in estimating future revenues. Some factors to consider in estimating the effect of competition are the following:
 - The company's current market share.
 - The company's trend in market share. (Is it increasing or decreasing?)
 - The company's business plan. This should specifically address how the company proposes to keep or increase market share through such means as reduced prices, increased promotional expenditures, and product improvements supported by increased research and development expenditures.

Sales Forecasting Techniques

There are various methods that can be used to forecast future revenues. These methods range from being as simple as using an average historical growth rate to as complex as running a Monte Carlo simulation. Whatever method is used to forecast revenues, the ultimate goal is to produce a forecast that is reasonable, supportable, and reflective of the company's future growth prospects and expectations. Many of the methods that will be discussed use the company's historical growth trends as a basis for predicting the future. While revenue forecasts should be indicative of the future, historical performance is often a good indicator of what the future will look like. A discussion of methods that can be used to forecast revenues is beyond the scope of this presentation.

Cost of Goods Sold

Once sales are forecast, it becomes possible to forecast expenses. Expenses can be broken down into two categories: fixed and variable. Obviously sales will have a limited impact on fixed expenses. In the short run, these expenses will probably not change.

However, over a long period of time, these fixed expenses will no longer remain fixed as even an expense such as rent will change as the business grows. If your rent is \$10,000 a month, it is \$10,000 a month regardless of your sales; unless of course, your sales are so large you must expand into additional facilities. Variable expenses on the other hand are directly related to sales. These expenses are generally forecast as a percentage of sales. For example, if the product costs are \$20 for every \$100 in sales, it is easy to use 20 percent of sales to determine this expense. When forecasting expenses it is important to look at trends and management expectations to ensure that your results are reasonable.

The expense forecast often begins with an analysis of the company's cost of goods sold. For companies that have sufficient historical financial data available, a good starting point to forecast cost of goods sold is to look at the company's historical gross profit margins. If the company's historical gross profit margins have been stable, this indicates that the company's cost of goods sold are primarily variable and can be forecasted as a percentage of sales. However, if the company's historical gross profit margins are volatile, the valuation analyst must determine the factors that are causing the company's gross profit margins to fluctuate from year to year. This could be the result of various factors including changes to the company's product lines, issues with the company's suppliers, or changes in raw material prices. When analyzing historical gross profit margins, the valuation analyst should be aware of any fixed or semi-fixed expenses, such as labor and depreciation that may be included in the company's cost of goods sold.

While the company's historical gross profit margins can be used as a starting point, a forecast should reflect future expectations and as a result, the valuation analyst must understand the various factors that will impact the company's gross profit margins going forward. For example, if steel is the primary material used in the manufacturing of the company's products, the valuation analyst must understand how changes in steel prices impact the company's profitability. If the company is unable to pass through price increases of raw materials to its end users, it is likely that the company's gross profit margins will fluctuate with changes in these raw material prices. When this is the case, the valuation

analyst should perform independent research to gain an understanding of the future outlook for these various raw material prices and determine how changes to these prices would impact profitability.

In some cases, a company will offer different product or service lines with different levels of profitability. In these instances, the valuation analyst should obtain historical revenue and gross profit margin information broken down by product line from management. This information could be useful in preparing a forecast of revenues and cost of goods by product line.

When analyzing a company's gross profit margins, we often find it beneficial to compare the gross profit margins of the subject company to benchmarking data from composite data, industry surveys, or guideline public companies. In particular, Value Line's industry and company reports contain forecasts for gross profit margins. This information can be useful in analyzing expected trends in profitability as Value Line's forecasts typically account for factors such as expected changes in raw materials prices. Financial benchmarking data can be useful for forecasting gross profit margins for new companies, or to serve as a reasonableness check for the gross profit margins forecasted for the valuation subject. For smaller companies, benchmarking against Microbilt's *Integra* database may come in handy. The biggest problem that you will encounter is that we see cost of goods sold and operating expenses frequently being classified differently than the subject company. For example, depreciation expense may be part of cost of goods sold in one place but included in operating expenses in the other. In this instance, you may need to add cost of goods sold to operating expenses and work with only one expense category instead of two.

Operating Expenses

Once cost of goods sold is forecasted, the next step is to forecast operating expenses. Before preparing a forecast of operating expenses, the company's historical income statements should be normalized such that the historical expense data does not contain

discretionary, nonoperating, and nonrecurring items. Once the historical expense data has been adjusted for these items, a good starting point is to look at a company's expenses line item by line item to determine which expenses are variable and which expenses are fixed.

Variable expenses typically increase or decrease in accordance with some measure, usually revenues. In order to determine if a particular expense is variable, the valuation analyst can look at the company's historical common size income statements. If the expense is dependent on revenues, the common size percentage for the expense items should be relatively stable. Some expenses may be variable in accordance with a measure other than revenues. For example, employee benefits and payroll taxes may vary with total salaries and wages as opposed to revenues.

Fixed expenses on the other hand are minimally impacted by revenues in the short run. These expenses typically include rent, salaries, utilities, real estate taxes, and insurance. Because fixed expenses usually have low correlation with revenues, the valuation analyst needs to review various documents, such as leases and insurance policies, to gain an understanding of how these expenses will change going forward. Often times, forecasted inflation can be used to estimate future increases of some fixed expenses.

For smaller businesses, certain expenses that might be variable for a larger company may be fixed for its smaller counterpart. For example, a smaller company needs to have a certain number of employees in order to operate. This initial layer of people may be considered a fixed expense until the company reaches a different level of operation. While the larger company may be able to absorb a reduction in people, the smaller company may not be able to do so.

Depreciation and Capital Expenditures

Another expense that often needs to be forecasted is depreciation. The depreciation forecast should reflect the economic depreciation of the company's existing assets and capital expenditures to be made during the forecast period. If this is done, the impact on

taxes must also be considered. Alternatively, if tax depreciation is used, the tax benefit should be reflected in the forecast. The type of depreciation you use will depend on the purpose of the valuation assignment.

Before forecasting depreciation, the valuation analyst should ensure that the company is currently depreciating its fixed assets throughout their appropriate economic useful lives. If this is not the case, it may be necessary to normalize the company's historical depreciation before forecasting future depreciation.

In order to properly forecast depreciation, it is important to know the condition of the company's existing fixed assets to gain an understanding of what replacement expenditures the company will need to make in the near future. In addition, the valuation analyst should obtain anticipated capital expenditure data from management. The company's historical balance sheets can provide guidance on what a normal level of annual replacement expenditures have been historically. When forecasting depreciation, the valuation analyst should ensure that depreciation expense does not exceed capital expenditures in the terminal period as a company cannot depreciate more than it purchases into perpetuity. When a company reaches a stabilized level of performance, its depreciation expense and capital expenditures should approximate each other with capital expenditures being greater than depreciation due to inflation. Often times, it is necessary to extend the forecast out over a long enough period of time until depreciation expense and capital expenditure purchases stabilize.

For smaller businesses, this may be somewhat simpler. Small companies frequently operate its machinery and equipment until it drops dead. Therefore, capital expenditures are very small most of the time and depreciation is relatively nonexistent because of fully depreciated assets.

Interest Expense and Borrowing Needs

In some instances it may be necessary to forecast interest expense. Interest expense should reflect interest on the company's existing debt and anticipated interest on future borrowings. If the company anticipates making significant capital expenditures in the near term, the valuation analyst should find out from management whether any of these expenditures will be financed by debt, and if so, how much. You may also need to forecast the interest rate. In order to properly forecast interest expense, the valuation analyst should review copies of all of the company's loan documents and obtain information on the company's current and future borrowing needs. When forecasting future borrowings, the valuation analyst needs to ensure that the forecasted borrowings are not significantly increasing the company's forecasted cash flows, leading to higher valuations. In theory, a company should not be able to become more valuable by borrowing more money.

When forecasting additional borrowings, the valuation analyst needs to ensure that the forecast does not result in the company significantly deviating from its capital structure. The valuation analyst should discuss with management whether the company plans to continue to stay leveraged or eventually pay all of its debt down to zero. If the company plans to continue to finance a portion of its operations with debt, it should be assumed that the company will maintain a similar capital structure going forward. You need to consider both, the company's own capital structure and the capital structure of similar companies. Changing the capital structure may depend on whether you are valuing a controlling or minority interest.

In control valuations, where the company's capital structure differs significantly from its industry peers, it may be appropriate to forecast the company's performance on a debt-free basis, which removes the impact of interest expense and changes in net borrowings from the cash flow forecast. A debt-free analysis may also be appropriate when the company's borrowing activity has been erratic in the past. In debt-free cash flow forecasts, it is assumed that negative projected cash flows would have to be financed by the company through use of debt.

Once again, smaller businesses may be easier to deal with because they frequently do not have the borrowing capacity of a larger company and they do not operate the business with any reasonable basis to determine what the stabilized capital structure should be. More often than not, smaller businesses only will borrow when it is absolutely necessary, and will pay down the debt as required by the loan.

Balance Sheet Forecast

Once the income statement forecast is completed, it becomes possible to prepare a balance sheet forecast. Similar to the income statement forecast, the balance sheet forecast can be broken down into item by item steps. The easiest technique may be to simply go down the balance sheet starting at cash and ending with equity.

Assets and liabilities can be forecast based on a variety of factors. These factors include historical common size analysis, ratio analysis (for example, days accounts receivable), management estimates, or as a percentage of an income statement item (for example, sales, cost of sales, operating expenses, and so on).

After completion of the forecast, it is necessary to review the forecast item by item to ensure that every number makes sense. Is the financial statement forecast of sales and net income reasonable? Does the balance sheet balance? Are the asset and liability levels reasonable? How do the forecasted common size financial statements and ratios compare to the historical items? Once the forecast is finalized, it becomes possible to complete the discounted future benefits method.

Once the forecast is reviewed and finalized, net cash flow can be calculated. Remember, the definition of cash flow, as used in a valuation context, differs from the traditional accounting definitions as described in the Financial Accounting Standards Statement No. 95, *Statement of Cash Flows*. There are two ways to calculate cash flow, one based on equity and one based on invested capital. Basic net cash flow (common equity) is calculated as follows:

$$\begin{aligned}
& \text{Normalized net income} \\
+ & \quad \underline{\text{Normalized noncash charges}} \\
= & \quad \text{Gross cash flow} \\
- & \quad \text{Anticipated capital expenditures} \\
+ \text{ or } - & \quad \text{Working capital necessary to support growth} \\
+ \text{ or } - & \quad \text{Debt borrowings or repayment} \\
- & \quad \underline{\text{Preferred stock dividends}} \\
= & \quad \underline{\underline{\text{Net cash flow to common equity}^*}}
\end{aligned}$$

* I intentionally left out the change in other assets and liabilities as I would expect these to be immaterial.

The manner in which net cash flow is derived will depend on whether the valuation analyst is valuing the equity or the invested capital of the company. As a reminder, valuing the invested capital involves appraising the company on a debt free basis. The net cash flow model illustrated previously is used by a valuation analyst when he or she is valuing the equity of the company. If the goal is to value the invested capital of the company, certain modifications must be made. Interest expense is added back, net of taxes, to restate the net income on a debt free basis. Because interest expense gives rise to a tax benefit, the add-back must be reduced by the corresponding tax benefit. Another modification is that there will be no addition or subtraction for new borrowings or repayment of old borrowings. Logically, if I am attempting to derive a debt free result, debt should be eliminated from the model.

The Smaller Business

So, what can we do to forecast for the smaller business? More often than not, the balance sheet of the business is created based on the owner of the business running the company for his or her personal benefit. Excess cash is removed when the owner needs it, capital expenditures are made sporadically, borrowings often come from stockholder loans, etc. In other words, the balance sheet is a mess when you compare it from period to period.

Why do you have to use the balance sheet at all? More often than not, I have found that there is much more consistency in the normalized net income of the business rather than the net cash flow. Wouldn't the net income be a better, less speculative, basis for forecasting the future benefit stream for this type of situation? The only thing that you have to determine is whether to use the most recent income, an average of net income, or a weighted average of net income.

If you decide to use net income as a basis for your forecasting, it is important that you do not ignore the possible need for capital expenditures in the short term. Keep in mind that the willing buyer would adjust the purchase price of the business if he or she knows that the first thing that must be done is to spend money to replace a machine. This may also be true with working capital deficiencies, but here you have to be careful to analyze working capital by reviewing levels of inventory and accounts receivable in particular. Chances are the smaller business will be sold as an asset sale so the buyer really does not care about the liabilities (accounts payable). The buyer will care if inventory levels are below the normal level needed to maintain sales. Once again, any acquisition assumes that the value includes a normal level of operating assets so the business can continue moving forward.

Cash may not be as important to the buyer since it is frequently not part of the deal. Cash can be thought of as an offset to accounts payable since the cash will be needed by the seller to satisfy the liabilities. Common sense and good judgment will take you a long way when you are analyzing this information.

Conclusion

Forecasting is not an easy task if it is done properly. It requires a considerable amount of time to properly support all of the assumptions used. It does not matter whether management has provided the forecast to the analyst, or if you had to prepare it yourself. At the end of the process, the forecast has to make sense. If you are not comfortable working with forecasts, business valuation may not be for you. There is no way to avoid having to deal with forecasts if you are going to do this work, even if you are valuing smaller

businesses. You may find yourself realizing that the best forecast is based on some average of history grown by a long term sustainable growth rate resulting in a good capitalization model instead of trying to discount future net income, especially in those situations where history will repeat itself.