



VALUATION DESIGN



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Design may seem a strange attribute in judging valuation reports. I imagine that most people think that valuation is mainly a financial exercise, but financial calculations are just one process in the middle of a longer mission. The entire process requires consistency in principles and their rigorous application throughout. Many reports fail to do this, mixing up accounting, market and economic theories. Establishing the proper starting point is key, as is normalizing data for valid comparison. Then, we have the business assessment and the design of the analytics upon variables that drive value. Using robust variables with methods that isolate them for assessment increases accuracy and reliability. When the valuator can determine Goodwill (most don't), then they can tie the components of the valuation directly to the Subject's balance sheet to get the most accurate result possible. Because so much variation exists in valuation approaches, even for trained professionals, we highlight some differentiators here.

ANALYSIS STARTING POINT

Defining the key element of the balance sheet to appraise determines the processes that follow in a valuation, but this basis is ill-defined within the profession, leaving many confused. A balance sheet has two sides that equal each other. One side represents the assets, the other side represents obligations (also described as claims against the assets). We have one valuation



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methodology that starts from the obligations side and another that starts with the asset side.

The school of thought promulgated by the American Institute of CPAs and others invested in GAAP accounting standards leads with a premise that each company has a market value that can be found by applying perfect market theory if we get the formulas and their inputs correct. Their starting point for analysis is found in obligations side of the balance sheet. The analysis begins with sales of company equity – traded shares of stock, not whole companies (we'll call this the 'equity school' going forward). Extending the paradigm, these theorists introduce public market data to define rates of return, which substitute for private market sales data. Public market data is readily available and explainable. Using this kind of data and formulas makes the work better fit the accounting profession's desire for audit compliance compatibility, but it can take you far afield from the Uniform Standards of Professional Appraisal Practice.

The combined effect of using perfect market theory, public market data and equity sale structure adds multiple complications to the valuation problem. Complication increases because using equity as the basis forces the introduction of other variables into the solution, such as debt structure, tax rates and working capital levels. These increased complications typically result in one of two outcomes, the client pays more for a good valuation, or the valuator omits steps which brings the result into question.

The opposing school of thought (we'll call this the 'asset school') begins with the premise that companies have multiple market values (depending upon



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buyer type among other things), and that these values do not resolve into a single value predicted by a financial theory. This paradigm uses an asset sale structure as the basic measure of value and private market sales of entire companies as the basis for determining rates of return. This simply is comparing what businesses sell for, in the market in which they are normally sold. No shift to a substitute market. It focuses on defining company Goodwill on the asset side of the balance sheet.

Private market sales data is irregular and challenging to apply. But, its value lies in obtaining hurdle rates for acquisition – proven thresholds where buyer–seller transactions occur, instead of passive rates of return in public markets. In addition, we also avoid difficulties imposed by debt structure, tax structure, and working capital levels. These complicating variables are screened out prior to value calculations, providing simpler methods and more reliable results.

Valuations may be valid with either approach, so long as all the differences between public and private markets are resolved somewhere in the process. If not, the report can be highly inaccurate. It becomes a case of Garbage–In, Garbage–Out. Although a perfect market formula may provide a viable indication of value, it won't with poor inputs. Flawed data entered results in flawed values out. Then consider that the formulas may not represent reality if they are not adjusted for market and balance sheet factors, and the output can become nonsensical.



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NORMALIZATION OF CASH FLOW STREAMS

One of the well-known steps in business valuation is the normalization of cash flow streams. The normalization of cash flows has a couple of goals. One goal is to identify the cash flow available to the owner. The other is to separate out the effect of a particular capital structure.

In the first step, we remove excess salary and perks that management may pay itself. Any amount over a fair market value salary is really an equity distribution, so this is sorted out. Another step is to remove non-recurring items that do not reflect the ongoing cash-generated capability of the business. These two adjustments help to find the expected cash flow that a new owner would get if they took control of the company.

Another major goal of normalization is to 'unlever' the effect of capital structure. We take this step because capital structure elements represent ownership prerogatives on how to maximize return of their investment. To normalize for any ownership, we add back interest, depreciation and amortization. Interest expense results from financing the company with debt instead of equity, a choice that doesn't affect company value in an asset sale. Depreciation and amortization are non-cash expenses that reflect past investment into business assets, and do not affect the future. Proper application of economic principles demands that past spending, called sunk costs, are not applicable to current value.

Every experienced user of valuation reports knows about normalizing the subject's cash flow, but did you know that normalization of comparable



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transaction data is just as important to getting a good result? We'll cover this next.

MARKET APPROACHES

The market approach looks at past sales of similar companies and finds multipliers of cash flow for those companies. These sale values are unlevered from capital structure, so when paired with unlevered cash flow streams, they provide effective measures of value. Multiples of Revenue, Discretionary Earnings, and EBITDA may be used. Net Income can be used also, but it is not an unlevered cash flow stream.

Here is a simple example to explain the market approach. Suppose the valuator has found their comparable transactions (comps), adjusted them, with these results for ten similar companies:

Multiple of Revenue: 0.5X

Multiple of Discretionary Earnings (DE): 3.0X

Multiple of EBITDA: 5.0X

Your company has revenue of \$5,000,000, DE of \$600,000 and EBITDA pf \$400,000. Applying the multipliers offers the following possible market values:

$\$5,000,000 \times 0.5 = \$2,500,000$

$\$ 600,000 \times 3.0 = \$1,800,000$

$\$ 400,000 \times 5.0 = \$2,000,000$



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Obviously, these three points do not provide an answer to the question of a single value. In the end, combined with other analysis, they will need to be reconciled into a single value. But, as you can see, the data offers a range of values from \$1.8 million to \$2.5 million for the subject. If the analysis was completed transaction by transaction, it would offer an even wider range.

A common error is not repeating the normalization of cash flow streams in the comps analysis. To provide an effective result, normalization of cash flows must be executed properly on both sides of the data set, not only for the subject being valued.

Transaction data provided to valuers has many fields. It includes actual metrics of interest, depreciation, amortization and actual owner compensation. These metrics are easily incorporated into a valuation model, but because the data is imperfect, the valuator must add steps that are not readily apparent to those unfamiliar with private company sales transactions.

What many valuers miss is the adjustment of each transaction for owner compensation. Otherwise, the EBITDA results can be pretty random. What good is a raw 10X multiplier if the owner in that comp has overpaid himself and shows a very low EBITDA? Answer: None. Garbage-In, Garbage-Out.

So, we adjust owner compensation to market using the valuator's knowledge of these types of companies. We don't have complete information on the comparable sale and how the owner participates in company operations, so we have to estimate. Applying a reasonable estimate of owner comp, however accurate it may be, provides highly more relevant benchmarks than unadjusted



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data. This is a crucial step. Without this adjustment, the only trustworthy measures of value in the data are multipliers of revenue and discretionary earnings, since owner compensation does not affect these measures. (Note – this is a small company issue. As companies get larger and transition to professional management this adjustment drops out. One reason that this step gets overlooked by valuers is that they may be unfamiliar with small companies, or trained by teachers accustomed with valuing large companies.)

As for non-recurring items, unfortunately we have no information on which to adjust for non-recurring expenses or non-recurring income in the transaction data. To adjust a comp, we would need to review the financial statements of each company, and we don't have cost effective access to this data. In addition to these two financial elements, the standard of value for the transaction is unknown. Was the comp a sale of equally empowered buyer and seller, was it a distress sale, was a premium paid by a competitor? We get no info on the conditions of the sale.

So, valuers must make decisions on how to handle comparable transactions when the data looks abnormal. The 'equity school' will exclude some transactions, but will generally try to average the results of as big a data set as they can assemble. They believe that the average gets them to the central tendency of value. The 'asset school', on the other hand will eliminate more of the outliers, and use their judgement to select the best indicators of value. Both schools screen transactions, but the 'equity school' typically accepts a larger sample size and relies on statistics. The 'asset school' typically uses a smaller sample size and incorporates judgement on the best comps to apply.



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BUSINESS ASSESSMENT

The market approach is a fairly raw measure of value because it does not adjust for the nature and characteristics surrounding the subject company being valued. But, it is a big step up in accuracy from a rule of thumb or industry average. To get to the next level of reliability, we perform a business assessment.

The business assessment looks at the company, competition and other business factors. The ability of the analyst to assess the situation is critical to completing other analyses beyond the market approach. The experience, judgment and analytical framework of the valuator is the differentiator in quality of the result. This makes every valuator unique, and helps determine the defensibility of their opinions.

Our business assessment is structured around Michael Porter's Five Force Model of industry competition, tools used by the angel investment community, common financial analysis, business operating experience and knowledge of local conditions.

The business assessment will gauge things such as:

- Economic conditions
- Current market for sale of the business type
- Current Financial Return to the Owner
- Growth Rate
- Trends in Performance



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- Performance vs. Industry Benchmarks
- Condition of the Company Assets
- Entry and Exit Barriers
- Strengths of Competitors, Suppliers, Customer

Out of this analysis, an investment risk factor is determined that is used for more sophisticated analysis.

INCOME APPROACHES

The capitalization of cash flow (CCF) is the most commonly used income approach. The cap rate used in a CCF represents a multiplier of cash flow, but instead of being expressed as a multiple, it is the reciprocal of the multiplier, and is presented as a percentage.

Most valuers place strong emphasis on the income approach. The theory behind the income approach is that it provides the present value of all the future earnings of a business at a stated rate of return. So, this means that the result represents the maximum value a prudent buyer will pay. Any value above this point will not provide the buyer their required rate of return on a purchase.

Since we have found the expected future cash flow of the business by normalizing the income streams, the key work for this method to be accurate is to develop the capitalization rate. The prominent model used by the 'equity school' uses public market data under the build-up method. Most valuers



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use this model as the sole CCF analysis, because no other method to develop a cap rate is commonly taught.

The build-up method is simple to apply and doesn't require much valuator judgement. Rate data is derived from annual statistical studies of how the public market changed from year to year. It represents equity returns – dividends and capital appreciation, not the hurdle rate to enter into a purchase. It is also based on minority interests, not control interest, and includes other elements such as public market volatility, working capital, interest, depreciation, amortization and taxes; all of which need to be adjusted at the end of the valuation in order to provide a proper result. If these adjustments are not made (and often they are not), then the characteristics of the company being valued are replaced by the characteristics of shares traded in public markets.

The 'asset school' does not have a generally accepted data set from which to develop a private market cap rate. Lacking an apparent alternative, the build-up model often gets included into an 'asset school' valuation. This is mixing apple and oranges unless it is adjusted to an asset value basis. I haven't seen this done appropriately in competitive reports, and it is a basis for challenging opponent's reports in a lawsuit.

Another alternative is to build a CCF model that mimics how prudent buyers approach an acquisition. We have a proprietary model that does exactly that. It is a key element in our success in defending Fair Market Value to taxing authorities.



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SPECIAL SITUATIONS & MINORITY INTERESTS

The market approach and CCF are the most common valuation approaches used. Some situations require the use of other models, but we can only lightly cover these here. The cost approach is one method. This looks at the costs needed to duplicate the company in its same condition. Another is a discounted cash flow analysis (DCF), which works with future projections of business performance. DCF is used when the future of the business is expected to be much different than its recent past, either growing or declining rapidly. Both these methods are often used for early stage companies.

In addition to whole companies, minority interests need valuation. These interests are often discounted in relation to the shareholders possessing control of the company. This discount analysis is applied to the shares after the value of the entire company is determined.

VALUE OF INVESTMENT CONCLUSION

Once all the methods are completed, the 'asset school' valuator will have a set of five to ten data points to reconcile into a single value using their judgement. This is often done by weighting the different results. The opinion of value is usually close to the weighted result, but if the valuator finds one method to be of particular value, it could be different from the arithmetic solution.



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The 'equity school' will take a different path because they believe that the analytical models are the primary path to a solution. Instead of explicitly relying on judgement, they will return to the models and adjust the variables to align all the method results close to one value.

INCORPORATING THE SUBJECT'S ATTRIBUTES

Since the opinion of value for the 'asset school' represents an asset sale, the valuator can easily calculate the Goodwill value of the company in one added step. The final stage of the valuation adjusts other assets and liabilities to market value and integrates the Goodwill into the balance sheet of the company. In low budget projects, book value is used for valuation of these assets. In more rigorous reports, each asset and liability is evaluated and marked to market value. This provides an asset by asset mark to market, which is known as the asset approach, and is widely acclaimed as the most accurate valuation methodology.

The 'equity school' will not be able to determine Goodwill at this stage because the data is derived from equity, so other factors are internalized within the value conclusion. NACVA and AICPA standards both invoke a requirement to adjust to the subject at this stage of the valuation, so the adjustment issue is known. However, as you may deduce from previous points, this should be a significant section of the valuation report because the result of their equity value calculation includes working capital, debt structure, tax rates, market volatility and other factors in addition to Goodwill. Because their approach works from market equity and then moves to subject asset value, these



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adjustments are difficult and susceptible to error. In some valuation reports this step is completely omitted.

CONCLUSION

When evaluating potential valuers, expert judgement comes into play in the business assessment and normalization of comparable market transactions. It is wise to review valuator qualifications with this in mind, as these areas are where good judgement is particularly needed. Being an expert in tax matters is much less germane to a business valuation than knowing the private market, the valuation models and how they work, for example.

When it comes to judging a valuator's methodology, questions in the areas where mistakes are commonly made are helpful. Even without being an expert, a candidate for your business should be able explain how they manage the issues in a way that you can understand. We'll end with what a few interview questions may be:

- Do you rely more on public market data or actual sales of similar companies?
- How do you select and adjust comparable transactions?
- Do you use the build-up method for the income approach?
- If so, how do you sort out debt, tax and working capital issues in adjusting from buildup method data to my company?



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I would be more than happy to talk through our solutions to the valuation problems identified here if you are interested in more detail. For more information, contact:

James Lisi, CVA, MBA
Santa Barbara Valuations Inc.
jim@sbvaluations.com
805.797.1710