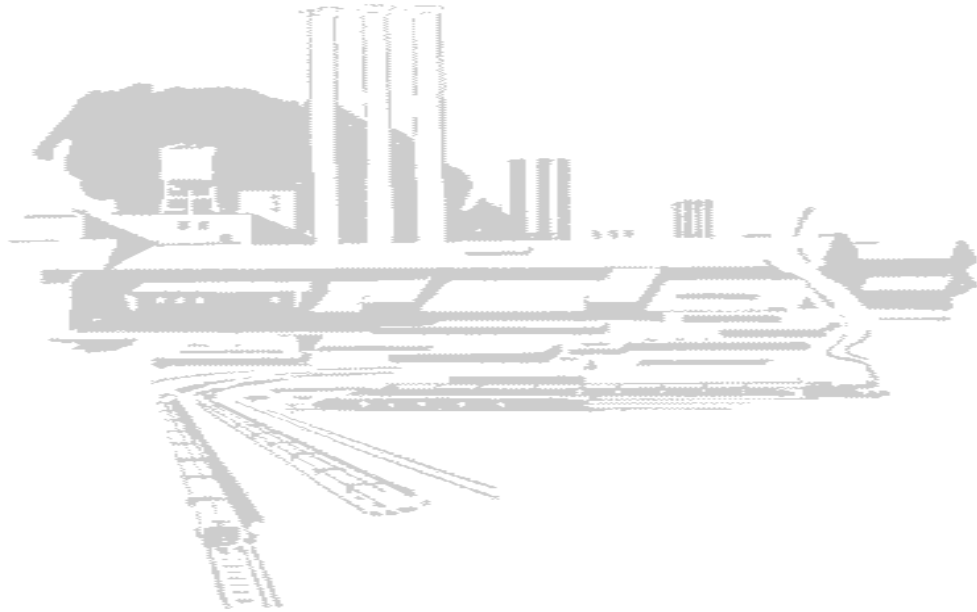

Key Aspects of
Valuing a Manufacturing Business



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Business Transition Specialists

Business valuation is a subjective process requiring comprehensive financial analysis, interpretation and projection of future performance. Business appraisers possess highly specialized skills and usually have backgrounds in finance or accounting. However, not having formal professional standards to calculate entity value, appraisers also have significant flexibility in arriving at their conclusions.

Manufacturing companies are the most challenging to value given the nature of the operations and the high level of tangible assets. An appraiser who focuses on “main street” businesses – the restaurants, convenience stores and beauty salons, can easily make unintentional technical errors when performing appraisals in the manufacturing sector. The results can be disastrous for the business owner.

When valuing a manufacturing business, there are five specific areas to give special attention to:

- Excess assets
- Real estate
- Depreciation expense
- Minimum turnkey value
- Research and development

Excess Assets

If a company is a going concern, valuation will likely be determined using an earnings-based methodology. In its simplest form, projected earnings is divided by a capitalization rate (or multiplied by an earnings multiple) that recognizes an aggregate business risk factor. This approach provides a value for the core operational assets plus goodwill. Often overlooked and buried within the balance sheet are excess assets that are not part of the “core” asset structure. Manufacturing companies in general are prone to having excess assets due to either inadequate management controls or the deliberate intent to avoid stock-outs. Failure to recognize these excess assets may result in a significant undervaluation of the business entity.

For example, if balance sheet inventory is \$1,000,000 and 10% is unrecognized excess, the business will be undervalued by \$100,000. Other asset categories that need to be examined are

cash, accounts receivable and machinery and equipment. This is not a casual assessment as there are specific quantitative techniques to identify excess assets.

Unfortunately, appraisers may incorrectly assume there are no excess assets, especially if they are inexperienced in manufacturing operations. Or, they may rely on the business owner to identify excess assets even though the owner may not fully understand the concept.

When separating excess assets from core assets, there are two basic questions to answer: 1) Does the asset category contribute to the revenue stream? If so, it's a core asset. 2) Is the quantity of the core asset required to contribute to the revenue stream? If not, the quantity over the required amount is an excess asset.

Real Estate

While most service businesses lease their facilities, many manufacturing companies operate from real estate they own. Real estate holdings can create significant complications in valuing a business, especially if the business is relatively small and generating only marginal earnings. Some of the key aspects relating to real property that warrant giving it special treatment are discussed below.

1. Real estate is usually a discrete asset, meaning that it can be separated from the business and deployed for different purposes. In reality, commercial real estate is a business in itself. Its current utilization may not be contributing to entity earnings at maximum potential.
2. The market value fluctuations of real estate may not follow the market value fluctuations of the business owning it.
3. Real estate does not carry the same level of business risk that is an integral factor in determining entity value.
4. Depreciation accounting can have a major impact on reported earning.
5. For small businesses in particular, real estate is likely to be a major, if not dominant, portion of total entity value.
6. Appraisal of real estate requires specialized skills.

Given the above factors, the inclusion of real estate in the valuation of the operational assets will almost always muddle the results. If the company owns real estate, the correct approach is to

have it appraised separately by a commercial real estate appraiser. The business appraiser should assume the company leases its real estate and adjust the normalized earnings accordingly.

Depreciation Expense

Depreciation accounting can easily distort entity value. This is an issue for many manufacturing companies given the large amount of machinery and equipment depreciation that hits the income statement.

From a cash flow standpoint, accelerated depreciation is advantageous, but it does not properly match expense with the time period it benefits. Consider, for example, a piece of machinery having an acquisition cost of \$50,000 and a useful life of twenty years. Depreciating it over its useful life results in an annual depreciation charge of \$2,500. However, depreciating it over IRS guidelines results in an annual depreciation charge of \$7,143 for seven years. If this period of accelerated depreciation falls into the historical time frame used for the valuation, earnings is reduced, and this in turn reduces entity value.

To avoid this distortion, depreciation expense should be appropriately adjusted at least for the high value assets. This is part of the analysis to determine normalized earnings where anomalies and discretionary expenditures are eliminated.

Minimum Turnkey Value

An earnings-based valuation methodology provides meaningful results only when a business is generating earnings at a level that justifies its capital investment. When a business operates at or below its economic breakeven point, an earnings-based valuation methodology returns an entity value that is less than its net asset value which is obviously illogical.

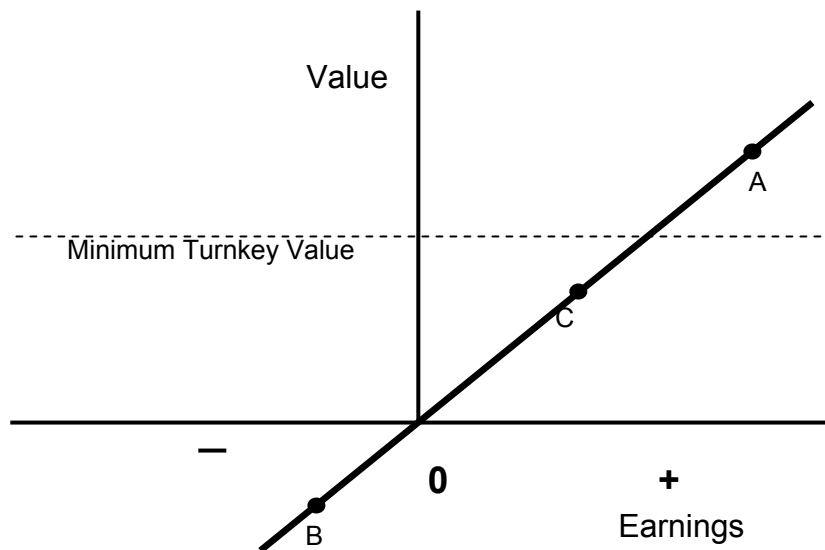
A business that satisfies the requirements of a going concern has a minimum turnkey value from the fact that it is already structured and capable of conducting business. Minimum value is based on the reality that launching a business requires a startup period to source and assemble resources, formulate operating practices, hire and train employees and establish a customer base, during which time the business operates with negative or marginal earnings. It is therefore advantageous to shrink or eliminate this startup period, and this can be accomplished by acquiring a business already operating even without earnings.

Recognition of minimum turnkey value is justified for two reasons: 1) common sense says it exists, and 2) the IRS has prevailed in tax court taking the position that it does exist.

Minimum turnkey value is equal to the fair market value of net assets plus going concern goodwill and is independent of earnings.

The following graph illustrates the basic premise that entity value is directly proportional to earnings. When a company is operating at point A, the derived value based on earnings is straightforward and valid. When operating at point B (negative earnings), the derived value based on earnings is negative and tells the appraiser that the valuation methodology is invalid. When operating at point C, the derived value based on earnings appears to be realistic, but is actually below minimum turnkey value. In this case, minimum turnkey value should be used instead of the calculated earnings value. In other words, asset value overrides earnings value.

If a business is only marginally profitable and the appraiser fails to recognize minimum turnkey value, it is likely that the business will be undervalued. This is one of the most common errors in business valuation. Even for a small company that is operating with only marginal profitability, the difference between minimum turnkey value and calculated earnings value can be hundreds of thousands of dollars.



Research and Development

Research and development is a discretionary expense that may have a major impact on calculated value. Incidental R&D can be ignored in the valuation process as it is normal for many manufacturing companies. However, significant R&D expense needs to be adjusted from normalized earnings because it will lower the fair market value of the entity. Normalized earnings reflect only expenses that are reasonable and necessary to operate the business excluding anomalies and discretionary disbursements such as R&D.

If engineering time records are not available, expenses should be allocated realistically between sustaining engineering and R&D. This breakout may have already been prepared by the tax accountant for the R&D tax credit.

Also, if new products will be introduced as the result of R&D, the incremental earnings should be recognized in the projected earnings stream.

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