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THE EXCESS EARNINGS METHOD- SHOULD IT BE PUT OUT TO PASTURE IN EQUITABLE DISTRIBUTION CASES?

By: George B. Hawkins, ASA, CFA

Introduction. Historically, accountants in a local community, many of whom lacked any formal training in valuation, have prepared the majority of divorce valuations. Since the excess earnings method is simple and easy to understand, many tended to use this method. Over time as this method was frequently used it became the ones judges understood and saw used over and over again, leading to its institutionalization as one of a number of accepted methods. This does not mean it is a good or valid method. This article will explain the method and give a simplified example of its use. It will then summarize the significant problems with the method and the many leaps of faith required to use it. It is hoped that this article can be an agent of change to enlighten those who must review valuations, whether in or out of court, to the method's serious flaws and illustrate why other better methods are available and why the excess earnings method should never be used. It is a faulty and intellectually bankrupt valuation model that leads to unreliable estimates of value. The method has largely fallen out of favor in the valuation field among sophisticated valuers. The only appraisers that continue to use it are those who don't know better, are ignorant of modern valuation methodologies, or, in the worst case, use the model because it can be easily manipulated to give a value that benefits a client's desired outcome. The latter reason is advocacy and is totally unacceptable since appraisers must be unbiased.



George Hawkins

Overview of the Excess Earnings Method.

The excess earnings ("formula method") method, as originally described in IRS Appeals and Review Memorandum 34, was developed at the onset of Prohibition as a way to determine the value of distilleries for the purposes of compensating the brewer for the loss in value of their company. Later reaffirmed by IRS Revenue Ruling 68-609 (in 1968), it is really a hybrid of the cost (where value is based on a company's assets) and income valuation (where value is based on the present worth, in today's dollars, of a company's anticipated future earnings or cash flows) approaches. This is because it involves the determination of the portion of a company's earnings that may be assumed separately to be the result of its tangible and intangible assets of the practice. Intangible assets are also referred to collectively as goodwill, and include assets such as the name, reputation, a skilled and trained workforce and other similar items.

The Method, Step-by-Step. The method involves the multiplication of the market value of the company's net tangible assets by a percentage annual rate of return these assets might reasonably be required to earn. This results in the annual portion of the company's earnings that are theoretically attributable to its tangible assets. These earnings that are derived from the tangible assets are then deducted from the company's total earnings to give that portion of the earnings that are leftover and theoretically stem from the company's intangible assets (also known as goodwill). By dividing these earnings from intangibles by a capitalization rate applicable to intangibles, the total intangible value (or goodwill value) of the business is

EXCESS EARNINGS (continued)

Table A
Summary of Steps in the Excess Earnings Method

- Multiply the net tangible assets of the company by the rate of return such assets might reasonably be required to earn.
- Deduct the portion of earnings from tangible assets from total company earnings to derive the portion of the earnings attributed to intangible assets.
- Divide the earnings attributed to intangibles by a capitalization rate for intangibles to estimate the total value attributed to intangibles.
- Add the value attributed to intangibles and the market value of the net tangible assets of the company together to arrive at an overall estimate of fair market value.

estimated. The goodwill value of the business is then added to the value of its net tangible assets to arrive at its total value. In summary, the excess earnings method involves the steps shown in **Table A**.

Example Using the Excess Earnings Method.

The following paragraphs will value fictitious ABC Co., Inc. using a highly simplified example of the excess earnings method. A full usage of the method would require additional steps and calculations.

Calculate the Adjusted Net Tangible Asset Value. ABC Co. has equipment on its books that is heavily depreciated and has an accounting book value of only \$200,000, whereas those same assets have a current fair market value (based on an appraisal) of \$800,000. Therefore, Company's shareholders' equity is adjusted to reflect equipment at its appraised fair market value rather than at book value as shown in **Table B**. Similarly, the Company has accounts receivable of \$400,000 on its books. However, the balance has not been written down to reflect a \$100,000 receivable that is not collectible since the customer is in the process of bankruptcy liquidation and no recovery is anticipated. The valuator must restate the value of the Company's assets to reflect the actual value of the receivables.

Whereas the Company's shareholders' equity by

Table B
Computation of Market Value of Net Tangible Assets, at 12/31/98
ABC Co., Inc.

Shareholders' Equity, at 12/31/98	\$2,500,000
Less: Accounts Receivable at Book Value	(\$400,000)
Plus: Fair Market Value of Accounts Receivable	\$300,000
Less: Net Depreciated Book Value of Equipment	(\$200,000)
Plus: Fair Market Value of Equipment, Per Appraisal	\$800,000
Equals: Adjusted Market Value (Net Tangible Assets), 12/31/98	\$3,000,000

its books was \$2,500,000, the adjusted market value of the shareholders' equity (the value of its net tangible assets) is \$3,000,000.

Determine the Rate of Return on Net Tangible Assets. To determine the earnings from the net tangible assets of the Company requires that the net

tangible asset value in **Table B** be multiplied by a rate of return that a buyer might reasonably expect to earn on this type of investment in equipment and accounts receivable. This is one of the many areas where the excess earnings technique gets fuzzy since valuers disagree over the validity of how to determine these rates, particularly since the assets themselves do not generate income in isolation.

One commonly used way to calculate the rate of return is to determine how much of the required investment in each asset can be borrowed and at what

Table C
Determining the Borrowing Capacity of the Company in the Excess Earnings Method (Rounded)

Asset Values	Times: Borrowing Percentage from Bank (Collateral Value)	Equals: Company Borrowing Capacity Based on Tangible Assets
Accounts Receivable	80%	\$240,000
Real Estate, Machinery and Equipment	70%	\$560,000
Totals	73%	\$800,000

annual percentage interest rate cost. Any remaining capital needs that cannot be borrowed can then be calculated at the cost of equity (a discount rate) for the Company. This is illustrated in **Table C**.

Based on the findings in **Table C** it is estimated that 73% of the value of the Company's tangible assets could be financed by debt and 27% (100% minus 73%) could be financed by equity. Based on these percentages the weighted average return on tangible assets for is 10.5%, calculated as shown in **Table D**. The cost of debt (in this instance based on a prime rate of 8.5%) is multiplied by the Company income tax rate to get to an

EXCESS EARNINGS (continued)

after-tax cost of debt (here 5.1%). This is because interest expense is tax deductible, and therefore has a lower true after tax cost, determined by multiplying the interest rate times 1 minus the tax rate, expressed as a decimal. In other words: $0.085 \times (1-0.40) = 0.051$, or 5.1%.

This cost of debt is multiplied by the portion of the Company's capital structure that can be financed with debt (73%) to arrive at a weighted cost of debt of 3.7%. Similarly, the cost of equity (25%) is multiplied by the portion of the capital structure that cannot be supported by debt (27%) to arrive at the weighted cost of equity of 6.8%. The weighted costs of debt (3.7%) and equity (6.8%) are then added together to arrive at the overall weighted annual return on net tangible assets (10.5%) as seen in **Table D**.

	<u>Cost</u>	X	<u>% of Capital Structure³</u>	=	<u>Weighted Cost</u>
Debt ¹	5.1%		73.00%		3.7%
Equity ²	25.0%		<u>27.00%</u>		<u>6.8%</u>
Total			100.00%		10.5%

- ¹ The cost of debt is calculated as the average prime lending rate (8.5%), adjusted to the after-tax cost of debt (interest is tax deductible) based on a 40% tax rate.
- ² The cost of equity would be calculated in the full report, taking into account the risks of the Company.
- ³ Additional borrowing capacity based on asset values. See previous calculation in Table C.

Calculate the Earnings from Tangible Assets.

The annual return on net tangible assets (10.5%) is now multiplied by the market value of net tangible assets (\$3,000,000) to arrive at the net earnings of the Company that is theoretically derived from its investment in net tangible assets (\$315,000) as shown in **Table E**.

Determination of the Capitalization Rate for Earnings from Intangible Assets. Assume in using the capitalization of earnings approach elsewhere in the full valuation report it was determined that the capitalization

<u>Adjusted Net Tangible Assets</u>	X	<u>Annual Return Applied to Tangibles</u>	X	=	<u>Net Earnings Attributed To Tangible Assets</u>
\$3,000,000		10.5%			\$315,000

rate was 20%, based on a discount rate of 25% less an annual long-term growth rate of 5%. This capitalization rate was applicable to the overall earnings of the Company, from all sources intangible and tangible, in total. However, in the excess earnings approach, only the earnings from the intangible assets of the Company are capitalized. The key question is: How can the valuator reliably estimate this rate? Therein lies one of the many problems with the excess earnings approach.

There are numerous data sources available to the valuator to develop a capitalization rate to apply to a company's overall earnings or cash flow. However, there is no market source of data on capitalization rates for intangible assets. Therefore, a significant problem with the excess earnings approach is that its implementation requires much greater subjectivity in the selection of a capitalization rate than by other methods.

One possible approach is to use the capitalization rate for overall Company earnings as a starting point in developing the capitalization rate for intangible assets. The rate of return on tangible assets is lower since they are less risky than goodwill. If the Company goes out of business the investor still has the tangible assets that he or she can sell to recoup part of their investment. By contrast, if the Company fails, goodwill will likely have little or no value to a buyer, making it more risky. If a capitalization rate for earnings of 20% takes into account earnings from all sources, tangible and intangible, and the return for tangible assets is less than for intangible assets, then this must reasonably imply that the capitalization rate for intangibles must be higher than 20%. The question is how much higher, an issue open to substantial subjectivity.

In valuing the Company, a 5% additional upward adjustment was made to account for the additional risk associated with goodwill, resulting in a capitalization rate applicable to the income from intangibles of 25% as shown in **Table F**.

Calculation of Value by the Excess Earnings Approach. Arriving at the Company's intangible (goodwill) value is now simply a matter of mathematical calculations. As shown in **Table G** the Company income attributed to intangible assets (\$685,000) is divided by the capitalization rate attributed to earnings from intangibles (25%) to arrive at the total intangible (goodwill) value of the Company (\$2,740,000). This intangible value is then

EXCESS EARNINGS (continued)

Capitalization Rate (all assets)	20.0%
Plus: Additional Risk for Intangibles	<u>5.0%</u>
Equals: Capitalization Rate to be Applied to Earnings from Goodwill (Intangibles)	25.0%

added to the market value of the net tangible assets (\$3,000,000) to arrive at an overall Company value of \$5,740,000.

Problems with the Excess Earnings

Approach. As noted earlier, the Internal Revenue Service originally developed the excess earnings (“formula”) approach in the Great Depression. In 1968, in Revenue Ruling 68-609, the Service reaffirmed the method, but stated that “*the formula approach should not be used if there is better evidence available from which the value of intangibles can be determined.*” The problems with the method relate to conceptual problems with the method as well as difficulty in objectively determining the two different rates of return it requires.

Tangible Assets and Goodwill are not

Separable. Conceptually, the excess earnings method assumes that there are two parts of a business or professional practice that each individually earn their

Company Net Income	\$1,000,000
Less: Income Attributable to Tangible Assets (from Table E)	<u>(\$315,000)</u>
Equals: Income Attributable to Intangibles (Goodwill)	\$685,000
Divided By Capitalization Rate For Intangibles (Goodwill) (Table F)	<u>25.0%</u>
Equals: Total Intangible Value of Goodwill	\$2,740,000
Plus: Fair Market Value of Net Tangible Assets	<u>\$3,000,000</u>
EQUALS: TOTAL COMPANY FAIR MARKET VALUE	\$5,740,000

own separate source of income: the tangible assets, and the intangible assets. It treats them as if they are separable and individually earn income distinct and apart from the other. For instance, the hard assets and receivables are assumed to earn an income stream that is quantifiable. The reality is that the assets themselves are only a means to an end. A business has to carry inventory and receivables and have desks and chairs, but these assets by themselves in no way generate income. Similarly, the goodwill of a business or practice is not a separable asset that by itself creates income, separate from having the tangible assets needed to operate.

No Market Source for Rates of Return. The method then assumes that a separate return can be identified for each set of assets, when in reality there is no objective market data available to estimate either of these returns. The methods used by valuers to develop these rates are complex and appear to have great rigor, since they involve determining the borrowing capacity of assets and then assigning precise mathematical weightings. The precision this provides is illusory.

In reality, there is no published data source that reliably tracks what buyers and sellers in the real world are willing to earn as a rate of return on earnings from equipment assets or the earnings expected from most intangible assets. Further, to get to this number requires a large leap of faith since once must subjectively jump from the capitalization rate used for earnings to one that we guess might apply to intangibles. It is interesting to note that Revenue Ruling 68-609 did not even use this degree of supposed rigor. It merely said that these rates of return should be based on “the percentage prevailing in the industry involved at the date of valuation.” The problem for valuers is that there is no such industry information available.

IRS Support for the Method Called Into

Question. Since originally devising the technique, it is not clear that the IRS still supports the excess earnings method. In the 1978 edition of the *IRS Appellate Conferee Valuation Training Program* (the IRS training manual for its agents that must review valuations), the Service severely criticizes the method, indicating that the rates of return are arbitrary and have no foundational basis. In fact, says the IRS:

“To attempt to segregate value based on earnings as between normal income and that induced by whatever goodwill or other intangible assets the business may possess, is to aspire to a higher degree of clairvoyance than has yet been demonstrated as obtainable by mere man.”

The latest 1998 edition of the *IRS Valuation Training for Appeals Officers Coursebook* does not even include a discussion of the excess earnings method at all in its discussion of techniques to value the closely held business. Furthermore, the method is almost never used by business valuers for estate or gift tax valuations. In the real world of business buyers and sellers, we have never seen the method used. Instead, other more accepted methods such as the capitalization of earnings and discounted future income techniques are widely used.

EXCESS EARNINGS (continued)

Conclusion. Given the problems with the excess earnings method, the time is now for business valuers to abandon the method altogether. Does this mean the capitalization of excess earnings method should never be used? The excess earnings method may still be useful in equitable distribution cases where an unsophisticated judge demands that it be used. However, the illusion that it has a high degree of reliability must be understood. The capitalization of earnings method makes far more conceptual sense since its capitalization rate is derived from market data. The method is commonly used in the real world by buyers and sellers of businesses. ♦

George B. Hawkins is co-author of the *CCH Business Valuation Guide* and a Managing Director of Banister Financial, Inc., a business valuation firm in Charlotte, North Carolina. He can be reached at ghawkins@businessvalue.com or 704-334-4932.

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