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Multiples Used to Estimate Corporate Value

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Abstract

We evalu ... e. We found, first, tha ... y generates more pre ... multiples. Second, ... timates of company ... s. Third, the earnings ... ltiple gene ... ccuracy and bias ... , vary greatly b ... e value in the com ...

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subsets of companies, such as companies that operate in bankruptcy, have been addressed. The study reported here explicitly examined the overall performance of a variety of multiples used for valuation. The purpose was to examine the biases and valuation accuracy of multiples based on earnings, sales, or book value of assets for several categories of companies.

For the aggregate sample, we found that all multiples yield estimates that are somewhat negatively biased. That is, the mean valuation errors are slightly negative, whereas the median valuation errors are roughly zero. The ratio of market value to book value of assets yields the most accurate estimates. Adjusting the market and book values for the level of cash does not improve the accuracy, but using forecasted earnings in place of historical earnings improves the estimates based on the P/E multiple.

We partitioned the sample into financial and nonfinancial companies and, within those two groups, formed groups based on size and profitability. We also partitioned the companies into those with high (low) levels of intangible assets and research and development activities. We found that valuations are more precise for large companies. For all company sizes, the asset multiple performs the best and the sales multiple performs the worst. Valuations based on the asset multiple appear to be most precise for companies with mediocre or low earnings; they are roughly equally as precise as
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Our research is certainly relevant to practitioners, such as investment bankers and analysts, because they use multiples to value companies, but we believe it is also consequential to academic researchers. For instance, studies of the effect of corporate diversification on value use multiples to value individual segments of a company and then compare the estimated aggregate value to the market value to determine the “excess value” created by diversification. The results presented here may help such researchers choose multiples that minimize potential bias embedded in the value measures, especially if the companies or company segments exhibit certain irregularities.