

A/E Business
Valuation and
M&A Transaction Study

\$399

FOURTH EDITION



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Published by:
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Maynard, MA 01754

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ISBN: 978-0-9985757-0-4

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Acknowledgements

In addition to contributing editors Ian Rusk, Michael O'Brien and Stephen Gido, whose backgrounds are detailed on page 40, we would like to acknowledge the contributions of Jonathan Voelkel, Ashley Cristman, Jason Small and Briana Lee who were instrumental in the collection, compilation and analysis of the survey data.

We would also like to thank the following organizations for their assistance in publicizing this survey and encouraging participation by their members and customers:

The National Center for Employee Ownership (NCEO) – The NCEO is a nonprofit organization, established in 1981, whose mission is to provide objective and reliable information on employee ownership. Its members include companies, professional practitioners, government officials, and academics among others. To learn more, please visit NCEO's website at www.nceo.org.

Business Valuation Resources (BVR) – BVR is a provider of premier products and services to the business valuation community. Business appraisers, CPAs, M&A professionals, business brokers, lawyers and judges, private equity and venture capitalists, business owners, CFOs, and many others turn to BVR's market databases and analysis for unimpeachable support for their conclusions of value. To learn more, please visit BVR's website at www.bvresources.com.

Finally, we would like to thank all those companies that took the time to submit their data, without which this study would not be possible.



About the Study

We created the A/E Business Valuation and M&A Transactions Study with the goal of developing a source of accurate and reliable data on the fair market value of businesses in the architecture, engineering and environmental consulting professions. What differentiates this study from others is that it is based on actual stock transactions as opposed to reported valuations. These include transactions by and between employee-owners (including redemptions of stock by the company, and the sale of newly issued stock from treasury), employee stock ownership plan (ESOP) transactions, and mergers/acquisitions.

Utilizing only stock valuation data from actual transactions is in keeping with the fundamental notion of fair market value. Perhaps the most commonly cited definition of fair market value is from U.S. Treasury regulations relating to Federal estate taxes [26 C.F.R. §20.2031-1(b)], which states,

“Fair market value, in effect, is the price at which the property would change hands between a willing buyer and a willing seller when the former is not under any compulsion to buy and the latter is not under any compulsion to sell, both parties having reasonable knowledge of relevant facts.”

In our opinion, if a firm values its stock at a certain price, but no shares have been transacted, that valuation does not meet the “willing buyer and willing seller” test and should not be used as a data point. To utilize such data would be akin to basing a real estate appraisal on the asking prices of similar homes, rather than using the recorded prices of actual home sales.

The stock transaction data contained in this study falls into three distinct groups, each representing a different level of value. It is important for the reader to understand these distinctions in order to properly interpret and apply the data from this study. The three groups are: 1. Minority interests in privately held firms; 2. Minority interests in publicly traded firms; and 3. Controlling interests in privately held firms. The distinctions between these groups with respect to stock valuation are detailed below.

Minority Interests in Privately Held Firms:

This group reflects transactions of non-controlling interests in firms that are not publicly traded. Minority interests are generally defined as interests of less than 50% of the outstanding voting stock, but in most cases the transactions are of much smaller blocks of stock, often as little as 1% or less. Because the buyer of the stock does not gain control over the company, and because of the lack of marketability of stock in privately held companies, the valuation of such stock is typically the lowest of the three groups.

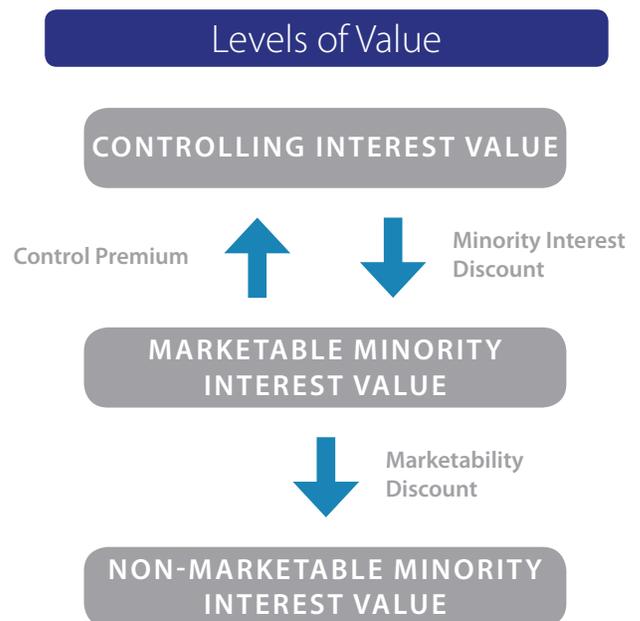
Minority Interests in Publicly Traded Firms:

This group reflects the trading price of non-controlling interests of publicly traded stock. Within the A/E and environmental consulting sectors, there are approximately 14 such firms that are publicly traded on North American exchanges (NYSE, NASDAQ and TSX). The prices of these firms are set by the market, with willing buyers and willing sellers trading shares daily on public exchanges. Because of the liquidity of such securities, they are frequently valued more highly than comparable shares of privately held stock.

Controlling Interests in Privately Held Firms:

This group reflects transactions of controlling interests (often 100% interests) in privately held firms, most often in merger or acquisition scenarios. Because a buyer is gaining control over the acquired company, valuations in such scenarios often reflect a premium for control, and are considered to have a greater degree of liquidity or marketability due to the ability of the owner to affect the sale of the company, or its underlying assets.

These three categories represent a spectrum of stock valuations. A single firm’s value may fall onto various points on this spectrum, depending on the degree of control and liquidity/marketability associated with the block of stock being transacted.



It is important to first understand where on the above spectrum the stock you are assessing falls in order to properly utilize the information from this study.

How This Study Was Compiled

The data used to compile this study was gathered through a confidential survey of firms throughout the United States and Canada. We have supplemented the data gathered from survey respondents with data compiled from publicly available sources. These sources include the public filings and market pricing of publicly traded firms, as well as publicly announced mergers and acquisitions.

All business valuation statistics reported in this study were derived from actual transactions of stock between a willing buyer and willing seller. These transactions include traditional internal ownership transition transactions, sales of stock to employee stock ownership plans (ESOPs), merger or acquisition transactions, and transactions of shares of publicly traded firms.

If you would like to participate in the study and have your firm's data included in future editions of the survey, which will be updated annually, please visit the following URL: <http://rog-partners.com/aestudy>. There you will be able to complete the survey online, or request a hard copy to complete and return. Survey participants receive a \$200 discount off the full price (\$399) of the study.

Appropriate Uses of this Study

This study has been compiled by accredited professionals in the fields of business valuation and mergers & acquisitions. All aspects of this study, from the creation of the survey questionnaire, to the analysis and compilation of the results were designed to produce a reliable data source that company owners, managers and their advisors may use to help assess their own firm or a merger/acquisition candidate. While no survey or study can take the place of a valuation analysis performed by a qualified and independent appraiser, this study may appropriately be used for the following purposes:

Benchmarking the value of your company for managerial purposes:

As a business owner or manager, there may be occasions when you need to develop a general understanding of your firm's value. For example, if the company holds insurance policies on major shareholders for the purpose of funding the stock redemption in the event of their death or disability, you may need to periodically assess whether or not the benefit amount is adequate.

Determining whether or not your existing stock valuation formula is producing valid results:

Many privately held firms in the industry employ a stock valuation formula to establish the share price for transactions of stock under their ownership plan. These formulas can become stale over time due to fundamental changes in the size, condition and performance of the company, or changes in the economy and business climate. Data from this study may be used to validate the results of such a formula.

Testing the reasonableness of another party's valuation analysis:

If another party has performed a valuation analysis of your firm, as an owner or manager, you will want to review that party's analysis and determine whether or not the results are reasonable. Application of data from this study will allow you to do that.

Conducting an initial assessment of an acquisition target:

When assessing potential acquisition targets, an important consideration is whether or not you will be able to afford the transaction. Data from this study can be helpful in such an early stage analysis.

The Art and Science of Business Valuation

The discipline of business appraisal is often described as part art and part science. There are well-established approaches and methodologies, and an ever expanding body of knowledge and legal precedence that appraisers must be familiar with. There is also a great deal of judgment and subjectivity in the process. As previously stated, this study is not intended to be used as a substitute for an independent valuation by a qualified business appraiser. For those that are unfamiliar with the processes and methodologies that a business appraiser would employ, this chapter provides a summary.

Business appraisers may use a variety of approaches to valuation that effectively follow the IRS guidelines for estimating the fair market value of a business entity. The determination of which methods to employ depends upon the unique aspects of the subject company and circumstances of the appraisal. Factors that the appraiser must consider include: The characteristics of the subject company; the availability of reliable financial forecasts for the subject company; whether suitable guideline publicly traded companies can be identified; and the availability of data on comparable private market transactions.

Generally, there are three types of approaches that a business appraiser may utilize: Market-based approaches; income approaches; and asset approaches.

Market-based approaches to valuation attempt to estimate the value of a company using pricing data from either publicly traded companies, or from mergers and acquisitions of privately held companies. The appraiser selects guideline companies that are similar in the nature of their operations to the subject company and derives market-based pricing indications from their share price (in the case of publicly traded companies) or their acquisition price (in the case of privately held companies). These indications of value, which are sometimes referred to as "valuation multiples" are then applied to the subject company.

Income approaches to value are based on the fundamental premise that the value of a business enterprise is equal to the present value of the future cash flow it generates. Income approaches are best utilized when a company's future cash flow can be reasonably estimated. Income approaches include the capitalization of cash flow method and the discounted cash flow or "DCF" method. Both methods require the appraiser to make assumptions about future earnings and cash flow, and determine an appropriate rate of return to apply to that cash flow.

Asset approaches to value are generally used when future earnings are uncertain (e.g. a liquidation scenario), or when the subject company holds significant tangible assets. The most common asset approach is the adjusted book value method. In this method, the appraiser examines the assets of the subject company and makes adjustments to the book value of those assets as appropriate.

When appraising a business considered to be a "going concern" (i.e. a business expected to continue to operate for the foreseeable future) in the professional services sector, which is not heavily reliant on tangible assets to generate revenue, appraisers generally rely on market and income approaches, and place little if any weight on asset approaches. The various methods are described in greater detail below.

Guideline Public Company Method:

The guideline public company method uses market pricing and financial data from publicly traded companies selected due to their similarity to the subject company. The appraiser then calculates valuation ratios or "multiples" based on the guideline companies' market value relative to various financial characteristics (e.g. revenue, earnings, book value of equity, etc.). These valuation multiples are then applied to the same financial characteristics of the subject company. Because the market pricing of these companies is based on transactions of minority interests of stock (i.e. small numbers of shares) traded on public stock exchanges, the resulting indication of value reflects a marketable minority-interest.

Market Transactions Method:

The market transactions method is another market-based approach to valuation. However, instead of utilizing data from publicly traded firms, this method uses pricing data from mergers and acquisitions of companies in both the public and private realm. As with the guideline public company method, the appraiser calculates valuation ratios or “multiples” based on the consideration paid for the transacted firms and the financial characteristics of those firms. These valuation multiples are then applied to the same financial characteristics of the subject company to arrive at an indication of value. Because the pricing data is derived from transactions involving the sale of majority or controlling interests of companies, the resulting indication of value reflects a marketable controlling interest.

Discounted Cash Flow Method:

The discounted cash flow method is an income approach to valuation that requires developing a forecast of the subject company’s future financial performance, typically for a period of five years or more. The resulting cash flows, along with the estimated value of the company at the end of the forecast period (referred to as its “terminal value”) are then discounted to their present value using an appropriate rate of return given current market conditions and the risk profile of the subject company. The terminal value is typically calculated using a capitalization approach, or through the application of market-based valuation multiples.

Capitalization of Cash Flow Method:

The capitalization of cash flow method is another income approach to valuation. Unlike the discounted cash flow method, this method relies on a single projected level of cash flow and assumes an on-going growth rate. The projected cash flow is “capitalized” or converted to an indication of value by dividing by an appropriate capitalization rate. The capitalization rate is equal to the rate of return appropriate given current market conditions and the risk profile of the subject company, less the assumed on-going growth rate of cash flow.

Adjusted Net Asset Method:

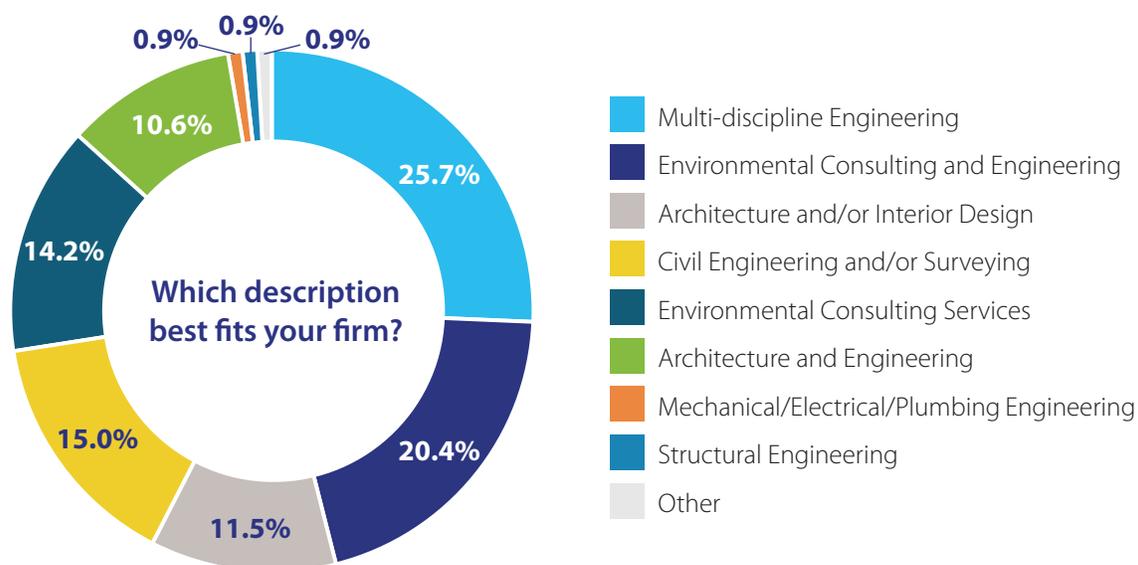
In the adjusted book value approach tangible and intangible assets are identified and stated at their respective fair market values. Liabilities are then deducted to derive the adjusted book value. This method is typically utilized for natural resource and real estate holding companies (industries with large amounts of tangible assets) and for companies with “going-concern” problems that may be facing liquidation.

Analysis of Survey Participants

This study was compiled through a confidential on-line survey of firms in the architecture, engineering, environmental consulting and related industries. It includes data from 198 distinct stock transactions. These transactions include companies that have transacted stock internally (multiple transactions within a given firm in a single year were considered a single transaction) and companies that have been sold in merger & acquisition transactions.

The study also analyzes valuation data from publicly traded firms in the industry, which is reported separately from the data and statistics on privately held firms in this study.

For confidentiality reasons, this survey does not provide details on any of the individual firms, with the exception of publicly available data from publicly traded firms. Below is a statistical summary of the firms that have participated in this study.



Participants in this study represent a wide range of service disciplines. The largest group represented was multi-discipline engineering firms at 25.7%. This was followed by environmental consulting and engineering firms at 20.4%. For purposes of compiling and reporting statistics from the survey, we have combined the various firm types into the following categories:

Engineering and E/a:

This category includes all firms that list an engineering discipline (either a specific discipline, such as structural, or multiple disciplines) as their primary service, including firms that also offer architectural services (E/a firms).

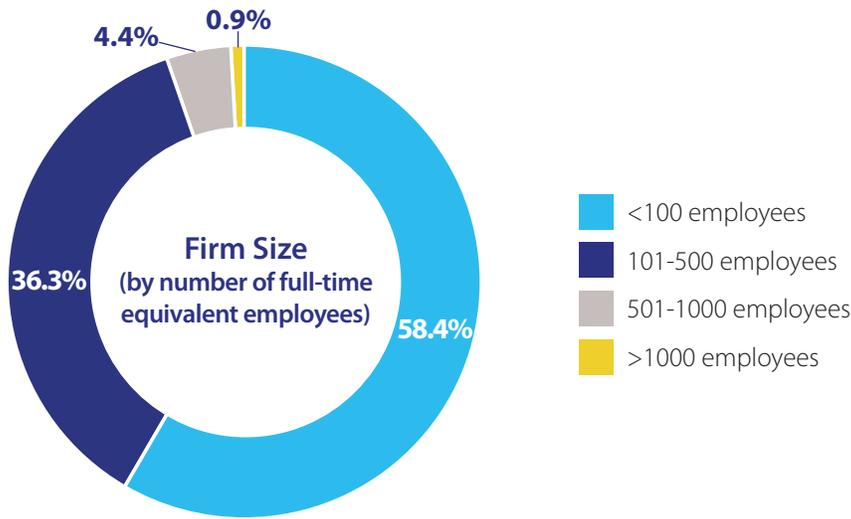
Architecture and A/e:

This category includes all firms that list architecture as their primary service. It includes landscape architecture and interior design firms, as well as architecture firms that also offer engineering services (A/e firms).

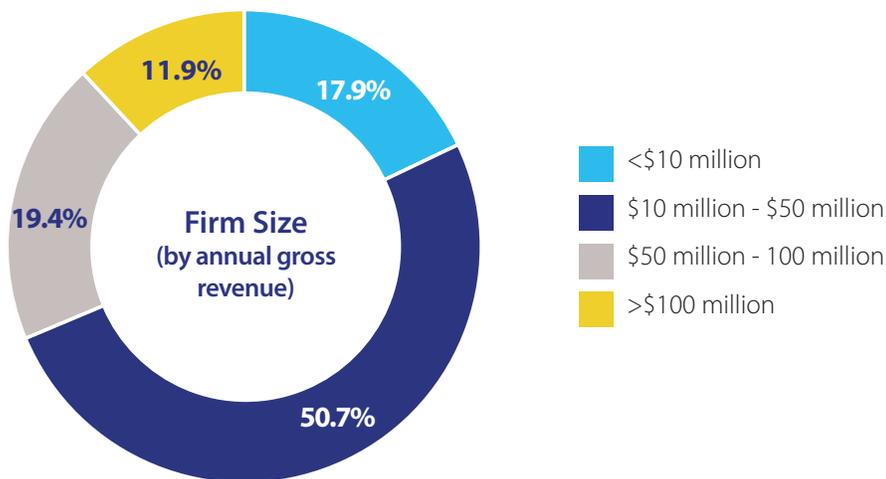
Environmental Consulting:

This category includes all firms that list environmental consulting as their primary service, including firms that also provide related engineering services, such as geotechnical engineering.

The survey includes a small number of firms that did not fit neatly into any of the above categories. These firms were included in the "All Firms" statistics, but not in any sub-categories.



As the chart above illustrates, the survey represents a wide range of firm sizes, from firms of under 100 employees, which make up more than half of the study, to firms with over 1,000 employees. Excluding the 14 publicly traded firms, the median size of the surveyed firms was 75 employees.



Similarly, in terms of gross revenue, the survey represents a wide range of firm sizes. The largest segment of participating firms was the \$10 million - \$50 million gross revenue segment, representing 50.7% of survey participants. Excluding the publicly traded firms, the median firm generated \$12.8 million in gross revenue.