

ACEC INSIGHTS

American Council of Engineering Companies of Massachusetts

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President's Message

By Lisa A. Brothers, PE, Vice President and COO, Nitsch Engineering



ACEC/MA held its 50th Anniversary and Annual Meeting on June 2, 2010. We celebrated, and continue to celebrate, 50 years of achievements and innovations that helped to shape our industry, advocate change and impact our society. Our keynote speaker, Paul Zofnass of the Environmental Financial Consulting Group (EFCG), provided a look into the future of our organization. A summary of his comments is included in this issue of *Insights*, and his PowerPoint presentation is posted on the ACEC/MA website.

The celebration also acknowledged, among many other items, our past presidents. I am honored and humbled to be following in the footsteps of these leaders as I serve as president of ACEC/MA in the coming year. I am appreciative of the opportunity to advance the vision and goals of ACEC/MA by working with the members, and alongside the 2010–2011 Board of Directors, who are incredibly dedicated, hard-working, passionate and vocal individuals committed to this great organization.

I would like to personally thank our exiting president, David F. Young, PE, of CDM, for his strong leadership over the past year. Mr. Young guided the organization

on many levels, with one of his most notable achievements being the passing of the Qualifications-Based Selection (QBS) legislation that ACEC/MA filed and ultimately helped pass into law. Mr. Young will continue to be involved with QBS as there is still much more work to be done. I would also like to congratulate all of you who have contributed over the years—ACEC/MA would not be here without your support!

The coming year will be exciting as together we explore new opportunities that will further strengthen our mission. As the “Voice of the Engineering Community,” I see us continuing to find ways to make that voice stronger. As president, I encourage us to focus on our three-year strategic plan, which has three primary goals:

1. Maintain recognition by all ACEC/MA members as the advocate for the promotion and protection of their business interests;
2. Enhance the financial strength of ACEC/MA; and
3. Maintain, diversify and grow the membership of ACEC/MA.

Within this plan, there are two items that I feel will make our “voice” stronger: communication and diversity.

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Engineering Industry Trends

By Paul Zofnass, President, Environmental Financial Consulting Group



The ACEC/MA 50th anniversary celebration featured keynote speaker Paul Zofnass, President of the Environmental Financial Consulting Group (EFCG), a New York-based financial consulting firm that advises the engineering/consulting (e/c) industry, including many ACEC/MA member firms, and provides guidance on merger and acquisitions, financial capitalization, peer benchmarking analysis, industry information and strategic planning. EFCG has been surveying the top 200 firms in the industry for that past 20 years.

During his presentation, Mr. Zofnass shared his observations on industry trends and thoughts on factors to remain successful in the coming years. A summary of his presentation follows:

1. Great Industry and Business: Historical data shows that the e/c industry is a great business to be in.

A Growth Industry: Our industry has been growing during the past 15 years at an average annual rate of 7.5%, exclusive of acquisitions. That represents a growth rate of roughly 50% more than the overall US GDP during this same period of time. In fact, as Chart 1 on page 8 shows, the e/c growth rate exceeded the US GDP growth rate in all but four of the past 15 years. I think it is fair to define an industry growing at a rate 50% greater than the US GDP to be a “growth industry.”

Increased Profitability: While once considered a “low margin” business, the industry has improved its profit margins consistently over the past 15 years from a

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CHART 1: E/C Industry Growth Rate vs. US GDP

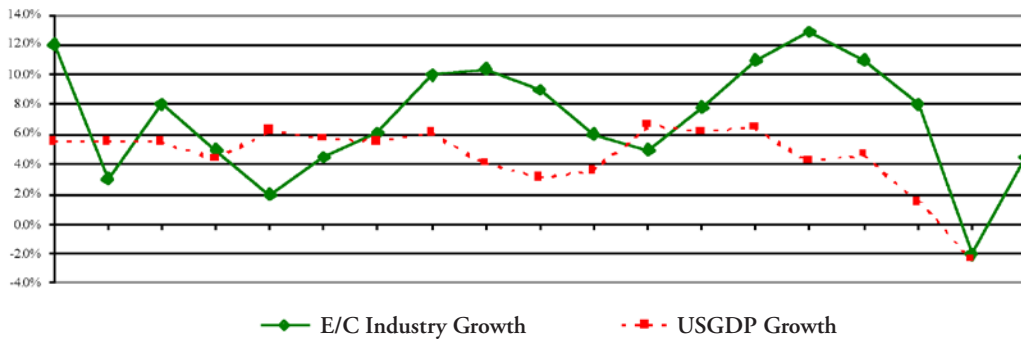
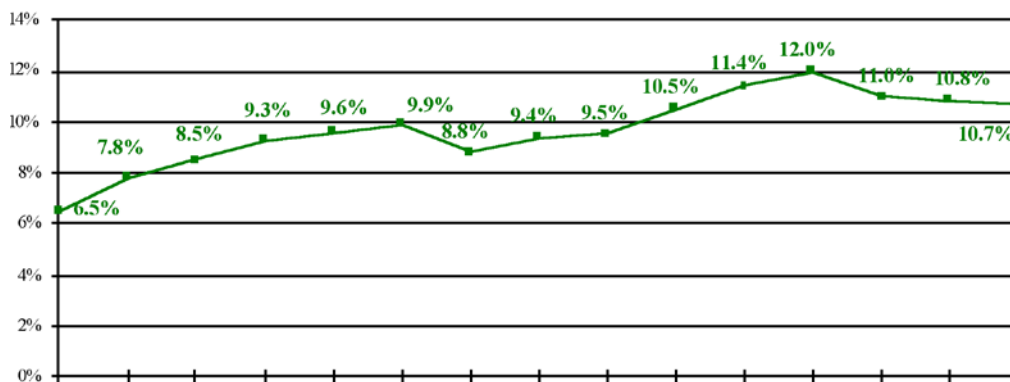


CHART 2: Profit Margin (EBIBT/Net Revenues)



roughly 5% EBIBT/Net Revenues ratio to roughly 11% (see Chart 2 above).

Maintaining Profitability in Tough Years: This industry has been able to maintain its historically high levels of profitability during the last two years. Even though the industry had its worst revenue year in the last 15 years, the profit margin held up at 10.8% (as shown on Chart 2), its fourth-highest margin year of this 15-year period.

Good Industry: It is a good industry that does good things and provides benefit to the public. We should all be very proud to be serving in it.

2. Outlook Is Excellent: The long-term outlook over the next decade is extremely positive for the kind of services that this industry provides. Ever since the beginning, people have wanted better homes, better facilities, better infrastructure, better travel and communication opportunities, better healthcare facilities, more physically comfortable and healthier environments, better access and usage of the

physical and natural resources that exist in the world, with better and more opportunities to trade and otherwise benefit from synergies that commerce can provide. It is this demand that the *e/c* industry attempts to serve. Only now, and for the first time ever, we are up against a new set of challenges. Because of the growth of worldwide civilization and economy, we are outstripping the resources available to us—clean air, clean water, clean minerals—and with our unquenchable thirst for more, we are running up against the constraints of what the earth can support. I see no business, or group of firms, in a better position to deal with this challenge, to reconcile this drive for “more” with the availability of “less,” than the engineering and consulting industry and the science, knowledge and creativity that supports it.

We can add one more dimension to this puzzle: the limited supply of engineering and environmental scientists graduating from universities each year. If the demand for our services is growing, and the supply of individuals trained and capable to deliver those services is

limited, the result should likely be a stronger pricing environment. Such an observation gives further reason to believe in continuing strength for our industry over the coming years.

3. More Business Orientation: With growth and opportunity come challenges. The increasing size and complexity of the organizations that perform these services require a discipline not taught in the engineering and scientific schools—that of economic efficiency, business and financial metrics, cost/benefit analysis and a focus on the “bottom line.” I believe that one of the major reasons why profitability in this industry has been increasing, and along with it the capacity of firms to pay bonuses, make distributions, and achieve appreciation in their stock prices, is the increasing focus on the “business” of engineering and consulting.

The increasing use of “peer benchmarking analyses” (comparing one’s firm along multiple operating and financial metrics with its most appropriate peers) can be an eye-opening experience that identifies where improvement is necessary, and where opportunities for financial improvement and profit enhancement exist. As the industry gets more sophisticated in measuring itself against peer firms and developing metrics to measure its own performances on the myriad of metrics that lead to financial and operating efficiency and profitability, there is a natural, human tendency to want to improve. If you can’t measure, you can’t manage. If you can’t compare, you can’t improve. In a competitive capitalistic environment in which we are operating, you need to keep improving to survive.

4. Managing Your Balance Sheet: One of our industry’s most glaring financial weaknesses is its traditional failure to “manage the balance sheet.” In its most simple form, this shortcoming is reflected in the fact that for our core service, we get paid for an hour’s work, roughly three and a half months after we perform it; yet we pay most of the expenses related to that work, on average, within one week (assuming you pay your employee salaries biweekly). Who finances that roughly three-month gap in cash flows? And how did the industry ever design such a negative imbalance in payments? In any event, the result means that to run an *e/c* firm requires

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a huge amount of capital to cover this cash flow gap, which has to come from the partners, shareholders and/or banks; this is what we refer to as the “investment capital.” If you can reduce the amount of investment capital required to finance your assets, you can make your financial lives a lot easier, you can finance growth more easily, you can internally transition ownership more easily and you can achieve a higher return on your equity investment. This is why managing your balance sheet is so important for an e/c firm.

Now, how do you manage your balance sheet? In our view there are three key areas on which to focus:

- a) *Minimizing your assets to the extent you can.* Your biggest target here is likely to be reducing your receivables (this entails getting your bills out quicker and getting the receivables paid sooner). But it also entails minimizing the amount you keep in cash (particularly in today’s financial environment, where the return on that cash is far below the cost to finance that cash) and keeping net fixed assets and other assets as low as possible, because for every additional dollar of assets you have, you need an additional dollar of capital.
- b) *Maximizing “Free Capital.”* What is “free capital”? It is any capital that doesn’t cost you anything, e.g. trade payables, due to subs, accrued liabilities, deferred taxes. Why maximize free capital? Because whatever you don’t get from free capital, you need to borrow from a bank (at an interest rate) or raise from your equity holders (who expect an even higher return on that).
- c) *Balancing debt and equity judiciously.* Too much debt is dangerous, but no debt is financially inefficient since debt is generally regarded as less expensive than equity.

Managing your balance sheet properly is a financial science and art in itself but increasingly critical to improving the health of your firm. Again, comparing your ratios with those of other similar peer firms is probably the most effective way of accomplishing this.

5. The Challenge of Internal Ownership Transition: One of the biggest challenges to

sustainability in an employee-owned e/c firm is the need to transition ownership from generation to generation. Failure to do this sufficiently, i.e. to pay out retiring shareholders, is frequently the trigger causing firms to sell out because of their inability to provide liquidity at reasonable valuations to their retiring shareholders. Interestingly, almost no other industry has as big a challenge with ownership transition as ours. This is because consulting engineering firms tend to be employee-owned, and employees ultimately retire. And, when those shareholders retire, they want to withdraw

Today, most financially savvy, economically sensitive people would say that value is a function of the earnings generation capability of an entity. Hence, it is earnings and earnings potential (not assets) that largely determine a firm’s ultimate “value.”

their capital. This challenge is even further increased by the amount of “working capital” required in this industry (primarily to finance the enormous level of receivables, as described above). And, the faster you are growing, the higher the receivables will be and the more capital needs to be retained in the company to support that growth. So, the need to finance revenue growth—hence, receivable growth—combined with the need to pay out shareholders’ equity as they retire, presents a major problem for a typical employee-owned e/c firm.

6. Understand and Manage Your “Capital Flows:” Given these challenges, to remain a viable, “sustainable,” employee-owned firm in this industry, it becomes critical to understand and to manage the “capital flows” of your business. By capital flows, we are referring essentially to cash, as provided by free capital, debt capital and equity capital, and as needed to finance your assets. There are a number of ways to improve your capital flows:

- a) *Improve profitability.* Increase not just your “operating margin,” meaning your “return on sales” or “return on revenues,” but also your “return on assets,” “return on invested capital,” and “return on equity.”
- b) *Manage your balance sheet.* The tighter your assets, the easier to finance internal ownership transition and finance growth.

c) *Balance growth with profitability.* The faster you grow, the more capital you will need. There is a “rule of thumb” we’ve developed by observing several hundred e/c firms: your annual growth rate cannot exceed your “operating margin” (defined for this purpose as earnings before interest, bonus and taxes, divided by net revenues).

d) *Reassess your internal valuation.* A lower valuation will generally facilitate internal ownership transition, as it will cost less for the firm to buy back retiree shares. However, a lower valuation will make acquisitions financially difficult or impossible to do, constraining growth.

A capital flows analysis will become crucial to optimizing your own viability as an employee-owned firm.

7. Earnings, Not Assets, Drive Valuations

Today: Nearly 20 years ago, most employee-owned e/c firms valued themselves at “book value.” Today, probably less than 10% of firms over \$25 million in revenues value themselves at “book.” The primary reason is that “book value” is a backward-looking concept. Literally, book value can be defined as what the shareholders have invested in the company in the past, plus the profits that the company has had since then but has not yet paid out. Today, most financially savvy, economically sensitive people would say that value is a function of the earnings generation capability of an entity. Hence, it is earnings and earnings potential (not assets) that largely determine a firm’s ultimate “value.” In fact, unless you are planning to liquidate your firm, assets, in terms of defining value, are pretty meaningless. Taking it even further, you might say that the more assets that it takes to generate a certain amount of profitability, the less value the firm has. Why? Because a buyer will need to infuse more capital into an asset-intensive business to grow it than into a firm that can generate the same level of profitability with less assets.

8. Valuations Are Increasing: Valuations have been steadily increasing for firms in this industry over the past 15 to 20 years. Part of the reason is that more firms are changing their approach to valuation from book value to a value based upon earnings, which generally

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(depending upon the multiple applied to those earnings) yields a value significantly higher than 1x book value. Another reason is that many employee-owned firms have incorporated into their ownership configuration the use of an Employee-Owned Stock Plan (ESOP), and ESOPs, under the ERISA laws that regulate them, require an annual outside appraisal for the valuation process at fair market value.

Fair market value is increasingly understood as a value well in excess of the traditional book value measurement (assuming the firm is reasonably profitable). Furthermore, buyers are willing to pay more for companies they acquire than they used to. That's partially due to buyers' access to capital, either through the stock market or private equity capital; it is also partially due to the perception that larger firms have certain strategic advantages to win the bigger projects and grow faster ("market share begets market share").

9. Mergers and Acquisitions Continue to Consolidate the Industry: In this respect, the e/c industry is the same as just about every other industry. The need to provide "one-stop shopping" for clients and customers has been providing certain benefits to the larger, more diversified firms. This tends to be the case particularly on the large projects, which also

tends to provide the larger firms a certain competitive edge in recruiting talent since most young engineers want to work on the biggest and most exciting projects. In a period when internal growth rates are in the 5–10% range, a steady diet of periodic acquisitions can double the overall growth rate, vis-à-vis a firm doing no acquisitions.

Another reason driving publicly-traded e/c firms to make acquisitions is that they can generally purchase another firm at a multiple of earnings lower than the value of their own stock. Or to use financial terms, acquisitions are "accretive" to earnings per share. So for all these reasons, M&A activity has been extremely high in this industry over the past few years, despite the financial crunch and difficult economy and, in our view, is likely to remain that way for the foreseeable future.

10. Preserving Viability as an Employee-Owned Firm: In our view, employee ownership is a great ownership vehicle for an e/c firm and has many advantages over other forms of ownership (e.g., corporate ownership, public market ownership, private equity ownership), and offers a perception of congeniality, professionalism, self-control, etc. more difficult to achieve with these other forms of ownership. On the other hand, in today's increasingly

competitive environment, where economic, financial and competitive realities are becoming more forceful, employee ownership poses greater challenges than ever before. The above points suggest some of the most critical challenges for the e/c industry and how employee-owned firms can best prepare themselves to remain a viable and thriving form of ownership. But employee ownership requires a far more disciplined business and financial approach than the traditional engineering mentality has been trained to perform. The firms that commit themselves to this discipline—that constantly attempt to improve through benchmarking, measurement, balancing key objectives, profitability, balance sheet management, capital flow models, reassessing their approach to internal valuation, compensation, ownership, and governance, and that can use selective acquisitions as a complement to organic growth and strategic optimization—will differentiate themselves as those that survive and thrive rather than those that will no longer be with us.

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