



The Society for Design Administration Web pages include White papers written by experts in the field on practice management subjects specific to the A/E/C industry. Below is an excerpt from one of the papers

Financial Statistics and Ratio Analysis

Financial Statements summarize the business activities of architectural and engineering firms. Once these statements are prepared and analyzed within the firm (e.g. Does our reimbursable expense match our reimbursable income, and, if not, what is the firm doing to either recover more expenses from the client or reclassify the expenses as indirect expenses to be recovered in overhead? Was that net profit what we had budgeted or not?), they are even more useful to the firm in attaining its finance goals when compared to other firms in the industry. Benchmarking is not the ultimate tool, but it is a necessary one in an overall analysis of the firm's financial position, and there are several ratios and financial statistics applied to the financial statements that are fundamental in understanding, comparing, and utilizing them. It is the method to keep your thumb on the financial pulse of the firm and to analyze information on which to base business decisions. It is the quick method third parties (creditors and banks) use to determine the risk of doing business with you. And it is also the manner that you use in the valuation of firms for firm transition plans or when seeking a merger or acquisition partner.

All ratio analysis is predicated on three factors if you want them to be comparable with industry standards

- ✓ **Gross vs Net Income:** Revenue must be divided and classified as professional services (those services performed by the firm's employees) consultants/subcontractors (those services performed by outside consultants) and reimbursables (expenses passed through to the client for payment). Total revenue includes all revenue (i.e. revenue from firm's professional services, consultants and reimbursables). Net revenue includes only firm's professional services. This distinction allows the firm to calculate overall profitability and profitability based only on its own efforts.
- ✓ **Direct vs Indirect Labor:** Since architectural and engineering firms earn revenue primarily based on labor (time and expenses) labor must be divided between direct (project related) and indirect (general overhead, marketing, and personal leave). This allows the firm to calculate overhead, breakeven multiplier and net multiplier all using a basis of direct labor.
- ✓ **Discretionary vs Non-discretionary Expenses:** Many architectural and engineering firms are small and closely held, expenses of a discretionary nature are often expensed through the firm as well as actual distributions of profits (e.g. bonuses) being expensed. This practice skews the profitability and overhead of the firm. Expenses need to be examined to correctly categorize expenses as non-discretionary (normal and customary for the profession) and discretionary such as: bonuses (unless usual and customary), unusual employee benefits (e.g. ski trips, weekend getaways), owner's personal expenses, unusual business development or entertainment expenses or expenses of the owner's other businesses or investments.

The following benchmarks or financial ratios are widely used within the A/E profession. A table of values is at the end.

- ✓ **Net Profit before Tax and Distribution on Total Revenues.** Calculated by dividing profit before tax and distributions by annual total revenue. Measures percentage of net profit (income) before taxes and distributions based on total revenues (Professional services + consultants + reimbursables).



- ✓ **Net Profit before Tax and After Distributions on Total Revenues.** Calculated by dividing profit before tax and after distributions by annual total revenue. Measures percentage of net profit (income) before taxes and after distributions based on total revenues (Professional services + consultants + reimbursables).
- ✓ **Net Profit before Tax and Distributions on Net Revenues.** Calculated by dividing profit before tax and distributions by annual net revenue. Measures percentage of net profit (income) before taxes and distributions based on net revenues (Professional services only). More accurate reflection of firm's own efforts especially when large amounts of consultants and reimbursables are included in total revenues.
- ✓ **Net Profit before Tax and after Distributions on Net Revenues.** Calculated by dividing profit before tax and after distributions by annual net revenue. Measures percentage of net profit (income) before taxes and after distributions based on net revenues (Professional services only). More accurate reflection of firm's own efforts especially when large amounts of consultants and reimbursables are included in total revenues.
- ✓ **Overhead Rate.** (Before Distributions) Calculated by dividing total overhead (total indirect labor and G&A expenses) by direct labor. Percentage of total office overhead to direct labor.
- ✓ **Profit-to-earnings ratio.** The profit-to-earnings ratios is determined by dividing the profit (before taxes and discretionary distributions) by the net operating revenue. It indicates a firm's effectiveness in completing projects profitably.
- ✓ **Net Multiplier.** Calculated by dividing net revenues (only professional services income) by direct labor. Measures multiplier you achieve on your own efforts. Therefore, multiplier equals [direct labor + overhead] times profit factor.
- ✓ **Current Ratio.** Calculated by dividing current assets by current liabilities. Measures reserve financial strength or how many times your current assets (resources) are greater than your current liabilities (obligations). Banks and creditors look at this.
- ✓ **Net Revenues per total staff.** Calculated by dividing net revenues (professional services only) by total number of staff. Measures general productivity of staff.
- ✓ **Net Revenues per technical staff.** Calculated by dividing net revenues by average number of technical staff (including design professionals and technicians as well as principals and administrators working on jobs). Measures general productivity of technical staff.
- ✓ **Chargeable Ratio.** Calculated by dividing total direct labor by total firm labor. Measures the percent of total staff time charged to projects. Also can be calculated separately for technical staff.
- ✓ **Average Collection Period or Accounts Receivable Turnover.** Calculated by dividing annual total revenues by the days in the year (360 or 365) and then dividing this result into average accounts receivable for the firm. Average number of days from date of billing to date of payment. (Not enough information given to calculate)
- ✓ **Backlog of work in Days.** Calculated by determining "daily billed average" by dividing total revenues year-to-date by number of days year-to-date; then dividing total value of fixed contracts plus estimated value of assured hourly work by daily billed average. Measures how much work is still to be completed. (Not enough information given to calculate)