

SAMPLE PAGES FROM:

2004 Operating Costs Report

Figures Based on 2003 Financial Data



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Introduction

The 2004 NTMA Operating Costs Report, based on 2003 data, provides detailed financial results of precision custom tooling and machining manufacturers. Results profiled in this report are based on income statement, balance sheet, and operating data provided by 228 precision custom manufacturers. The tables and graphs contained in this report are designed to provide comprehensive, yet straightforward guidelines for analyzing profitability among machine tool manufacturers. This management tool is designed to provide the resources that enable NTMA members to evaluate, plan, and better manage their businesses.

Report Format

This report is presented in five sections: Executive Summary, Detailed Results, Analysis By Industry Classification, Category Sales Volume Analysis, and the Appendix.

- **Executive Summary**—The summary provides an overview of the study results, with emphasis on the differences between the typical firm and the high profit company.
- **Detailed Results**—This section examines return on investment, income statement, balance sheet and financial ratios. Management commentary is provided to help non-financial managers more easily understand the meaning and importance of these critical operating statistics.
- **Analysis By Industry Classification**—An in-depth review of performance for NTMA precision custom manufacturers based on their concentration of business by sector. Precision custom manufacturers in the survey reported sales volume by industry (Tools & Dies, Molds, General Precision Machining, Aerospace Machining, Special Machines, Production Operations and Diversified). Survey participants were then classified based on the primary industry category served (more than 50% of their sales volume).
- **Category Sales Volume Analysis**—This section provides sales volume category detail for each of the industry classifications above. This allows for more precise comparisons within an industry group.
- **Appendix**—Finally, the appendix includes an overview of the survey methodology and calculations and definitions of the ratios and measures used in this report.

Explanation of Statistics

Almost all of the figures provided in this report are medians. The median for a particular variable or calculation is the middle number of all values reported arranged from lowest to highest. The median represents the typical company's results. The median is not influenced by any extremely high or low values reported. An average or mean value, on the other hand, may be influenced by extreme values. Thus, the median is the preferred statistic for this analysis.

To determine the group of high profit firms, all participating firms are ranked on the basis of pre-tax return on assets (ROA). The high profit category includes the top twenty-five percent of the firms based on ROA. The figures reported for the high profit firms represent a median for this group.

Please note that throughout the report, "N/A" designates numbers that are not available due to limited sample size.

Participant Support

Each NTMA member that participated received a personalized Financial Performance Report (FPR). The Financial Performance Report contains comparisons of the firm's financial performance to the industry. Areas where improvement opportunities exist are indicated and specific suggestions are provided to help achieve higher profitability.

Product/Customer Profile

Most firms fail to take control over their product and customer mixes. Oftentimes the choice of products manufactured and customers serviced is left almost to chance. The two must complement each other, and that balance is not achieved without some measure of planning.

Product Mix

In recent years, the product selection decisions have become much more complex. To be effective today, it is necessary to continually review the mix of products being manufactured to ensure that it is appropriate. The focal point of such a review should be the needs of the customer base being serviced.

Customer Mix

For many firms, an inordinate amount of time and effort is spent serving unprofitable customers. Customers should be reviewed periodically in light of the sales being generated for the company. In most instances, firms attempt to support too large of a customer base.

	Typical NTMA Mfr	High Profit NTMA	Sales Under \$1 Million	Sales \$1 - \$2 Million	Sales \$2 - \$3 Million	Sales \$3 - \$5 Million	Sales \$5-\$10 Million	Sales \$10-\$15 Million	Sales \$15-\$25 Million	Sales Over \$25 Million
Tools & Dies	19.5%	19.7%	15.7%	15.0%	15.8%	18.6%	28.0%	15.7%	24.1%	29.5%
Molds	10.8	4.9	14.3	9.6	5.8	12.3	12.0	18.2	5.9	0.0
General Precision Machining	36.4	38.0	49.3	53.5	44.0	30.8	24.4	26.3	39.2	17.3
Aerospace Machining & Fabrication	13.2	12.9	4.6	10.6	8.0	14.9	16.6	15.0	15.9	26.1
Special Machines	7.8	8.7	5.5	5.9	9.3	11.4	6.7	8.7	2.9	11.5
Production Operations	<u>12.3</u>	<u>15.8</u>	<u>10.6</u>	<u>5.4</u>	<u>17.1</u>	<u>12.0</u>	<u>12.3</u>	<u>16.1</u>	<u>12.0</u>	<u>15.6</u>
Total Sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sales By Type Of Customer

Automotive	26.0%	19.8%	15.7%	24.3%	21.6%	29.4%	27.9%	30.3%	27.5%	27.1%
Aerospace & Ordnance	15.5	15.9	7.8	13.8	10.6	15.5	19.8	17.6	17.9	25.8
Appliances	3.8	3.5	2.9	3.1	3.3	3.2	5.2	7.9	1.8	0.0
Electrical & Electronic	6.0	2.0	7.1	9.3	4.1	6.5	5.1	6.6	2.4	2.0
Mining, Construction, Ag. & Oilfield Equip.	7.5	10.3	10.5	6.7	6.3	4.9	8.9	2.5	16.6	11.4
Chemical & Petroleum Industries	1.8	0.4	1.2	0.6	6.5	1.5	1.6	0.2	0.3	3.4
Fabricated Metal Products	13.4	13.8	22.1	13.0	14.9	18.0	6.0	15.9	6.4	7.9
Food Processing & Packaging	3.4	5.2	3.9	3.8	5.0	4.2	1.2	0.7	3.4	10.5
All Other Customers	<u>22.6</u>	<u>29.1</u>	<u>28.8</u>	<u>25.4</u>	<u>27.7</u>	<u>16.8</u>	<u>24.3</u>	<u>18.3</u>	<u>23.7</u>	<u>11.9</u>
Total Sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Government Work (% of Net Sales)

Prime Contractor	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Subcontractor	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Form Of Organization

C Corporation	45.6%	31.3%	57.1%	44.2%	44.0%	47.6%	40.5%	45.0%	35.8%	75.0%
S Corporation	51.3	66.7	42.9	52.9	56.0	50.0	54.1	50.0	57.1	25.0
Partnership	0.5	2.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0
Limited Liability Corporation (LLC)	2.6	0.0	0.0	0.0	0.0	2.4	5.4	5.0	7.1	0.0
Limited Liability Partnership (LLP)	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Income Statement

The income statement summarizes the income and outgo of funds for the entire year. It reflects the ability of management to make sales, control expenses, and thereby earn profit. The income statement serves as a report card for management's performance over the year. The level of performance depends primarily upon control of two areas: gross margin and operating expenses.

Manufacturing Profit Management

Manufacturing Profit, the first measure of profitability, considers all expenses related to the cost of manufacturing the products sold. To be successful a company must earn enough manufacturing profit to cover S, G & A expenses and earn a reasonable profit as well.

Selling & Administrative Expense Management

Selling & administrative expenses can be difficult to control, particularly for the smaller firm. Expense management is frequently referred to as a survival issue--poor expense management may jeopardize the company's future.

	Typical NTMA Mfr	High Profit NTMA	Sales Under \$1 Million	Sales \$1 - \$2 Million	Sales \$2 - \$3 Million	Sales \$3 - \$5 Million	Sales \$5-\$10 Million	Sales \$10-\$15 Million	Sales \$15-\$25 Million	Sales Over \$25 Million
Net Sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost Of Goods Sold										
Direct Materials	18.9	21.3	8.8	13.6	18.7	19.4	19.3	23.9	27.2	28.5
Subcontracting	6.3	6.3	1.4	4.4	6.7	6.1	6.3	6.7	4.5	3.9
Direct Labor (Straight Time)	21.1	18.6	28.7	27.1	21.3	21.6	21.6	17.6	18.1	13.3
Overtime Premium	2.1	2.2	0.0	2.7	1.9	2.5	2.2	1.4	2.0	2.1
Total Direct Labor	23.2	20.8	28.7	29.8	23.2	24.1	23.8	19.0	20.1	15.4
Repairs & Maintenance	1.9	1.9	1.8	1.4	1.6	1.9	1.9	1.7	2.3	1.4
Indirect Labor	4.1	3.6	1.4	1.6	2.9	4.2	5.4	4.3	4.3	9.6
Supervision	3.6	2.8	1.6	4.5	3.7	3.8	3.0	2.9	3.4	3.5
Payroll Burden (manufacturing employees)	3.2	2.8	3.3	3.2	3.2	3.3	3.6	2.8	3.0	2.6
Employee Welfare (manufacturing employees)	5.1	3.9	5.8	5.3	5.3	4.7	5.9	5.5	4.4	3.8
Tools & Supplies	3.5	3.5	3.1	4.0	3.3	3.4	3.5	2.7	3.2	4.1
Utilities (heat, light, power, water)	1.7	1.3	2.5	2.0	1.5	1.5	1.4	1.5	1.3	1.7
Rent/Lease (buildings)	2.4	2.0	4.7	3.4	2.5	2.4	1.6	1.7	1.3	2.8
Rent/Lease (equipment)	0.1	0.0	2.7	0.0	0.1	0.0	0.0	0.0	0.1	0.1
Insurance (liability & casualty)	0.8	0.8	1.9	1.1	0.9	0.6	0.6	0.7	0.4	0.4
Taxes (property, business licenses, etc.)	0.8	0.6	1.7	0.8	0.8	0.7	0.6	0.7	0.6	0.9
Depreciation & Amortization	5.1	4.0	7.7	5.6	6.2	4.3	5.0	5.2	5.5	6.0
All Other Manufacturing Expenses	1.3	1.0	1.4	0.9	1.3	1.9	1.0	1.0	2.4	1.4
Burden Differential	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Cost Of Goods Sold	82.0	76.6	78.5	81.6	81.9	82.3	82.9	80.3	84.0	86.1
Manufacturing Profit	18.0	23.4	21.5	18.4	18.1	17.7	17.1	19.7	16.0	13.9
Selling & Administrative Payroll										
Officers'/Owners' Salaries & Bonuses	4.9	5.3	8.1	7.0	4.3	4.0	3.8	3.8	2.6	1.6
General Office & Management Salaries	3.3	3.1	3.3	3.4	3.4	3.9	2.7	2.7	2.4	1.8
Sales Salaries, Commissions & Bonuses	2.0	1.3	0.0	0.0	1.1	2.0	2.4	2.6	1.5	1.3
Payroll Burden (Workers' Comp., etc.)	0.7	0.5	1.3	1.1	0.8	0.7	0.6	0.5	0.4	0.5
Employee Welfare (medical, life insurance, etc.)	0.9	0.9	1.1	1.5	1.2	1.0	0.9	0.8	0.8	0.9
Total Selling & Admin. Payroll	11.8	11.1	13.8	13.0	10.8	11.6	10.4	10.4	7.7	6.1
Other Selling & Administrative Expenses										
Advertising & Promotion	0.1	0.2	1.0	0.2	0.3	0.2	0.3	0.2	0.1	0.1
Travel & Entertainment	0.5	0.4	0.4	0.3	0.4	0.5	0.5	0.7	0.5	0.4
Other Selling Expenses	0.2	0.2	0.3	0.0	0.1	0.2	0.2	0.2	0.2	0.1
Bad Debt Losses	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
All Other Selling & Admin. Expenses	3.7	2.9	7.2	4.9	3.2	3.4	3.2	3.6	3.0	2.9
Total Other Selling & Admin. Exp.	4.5	3.7	8.9	5.5	4.0	4.3	4.3	4.6	3.8	3.5
Total Selling & Administrative Expenses	16.3	14.8	22.7	18.5	14.8	15.9	14.7	15.0	11.5	9.6
Operating Profit	1.7	8.6	-1.2	-0.1	3.3	1.8	2.4	4.7	4.5	4.3
Other Income	0.2	0.2	0.0	0.2	0.2	0.3	0.3	0.4	0.2	0.1
Interest Expense	0.9	0.7	0.8	0.7	0.7	1.0	1.1	0.9	0.9	1.1
Other Non-operating Expenses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3
Profit Before Taxes	1.0%	8.1%	-2.0%	-0.6%	2.8%	1.1%	1.6%	4.2%	3.6%	3.0%

Balance Sheet

The balance sheet is an under-utilized financial statement. If properly analyzed, it provides significant insights into the financial structure of the firm. This page examines the composition of the balance sheet while the pages that follow derive some key ratios from the balance sheet information.

Both the assets and liabilities sides of the balance sheet offer insights into the financial posture of the business. The assets side reflects where investments are made. The liabilities side identifies which business stakeholders made the investment.

ASSETS — The asset portion of the balance sheet represents the total investment made in the firm. For the typical company, Current Assets represent 57.3% of the investment, Net Fixed Assets account for 40.0% and the remaining 2.8% of the investment is in Other Fixed Assets.

Current Assets — When attempting to improve liquidity in the short-term, two current asset accounts require particular attention – inventory and accounts receivable. Accounts receivable are uncollected dollars owed to the firm for products sold on credit. These funds are unavailable for paying immediate cash obligations. Dollars tied up in Inventory directly impact costs. At the same time, inventory shortages may result in lost sales. The challenge for the firm is to generate adequate sales volume without building an excessive investment in inventory.

Fixed Assets — Cash flow could improve with tighter management of fixed assets, especially when it comes to selling surplus or idle assets. In order to improve earnings managers must efficiently deploy idle/surplus assets internally or dispose of them. If the utilization of fixed assets are not tracked, through mechanisms such as service and repair records of equipment, the company could face future write-offs, thereby damaging profitability.

LIABILITIES AND NET WORTH — Liabilities and net worth represent the two methods of funding assets. Two items are of special significance in this section of the balance sheet. They are: (1) the ability of the firm to make use of interest-free financing and (2) the level of financial conservatism employed.

Accounts payable represents an interest-free source of capital for the firm. In most cases firms are trying to use accounts payable to finance a major portion of their inventory investment. This involves both efforts to turn the inventory faster and efforts to negotiate longer credit terms. Given the small size of the inventory investment, firms are probably already doing all that they can with regard to accounts payable financing.

The amount of net worth or owner equity on the balance sheet indicates the financial conservatism of the firm. Net worth is the sum of the owners' paid-in capital, plus loans from owners, plus all earnings retained in the business. For financially conservative companies, net worth is typically fifty percent of total assets or higher. Once net worth begins to exceed sixty percent of total assets, the firm is moving to the point of being overly conservative. If net worth exceeds sixty percent of total assets the firm is simply not employing debt in a way that would allow the firm to take advantage of all expansion opportunities.

	Typical NTMA Mfr	High Profit NTMA	Sales Under \$1 Million	Sales \$1 - \$2 Million	Sales \$2 - \$3 Million	Sales \$3 - \$5 Million	Sales \$5-\$10 Million	Sales \$10-\$15 Million	Sales \$15-\$25 Million	Sales Over \$25 Million
Assets										
Cash & Marketable Securities	7.7%	16.0%	20.6%	15.3%	12.8%	4.9%	4.6%	4.5%	4.4%	2.6%
Accounts Receivable	29.6	30.5	29.8	25.1	28.7	34.3	29.0	33.5	25.7	23.4
Inventory	18.3	15.4	5.8	13.2	15.0	17.6	21.7	18.4	23.1	30.3
Other Current Assets	1.7	1.5	2.0	1.4	2.1	1.6	1.6	2.8	1.2	2.0
Total Current Assets	57.3	63.4	58.2	55.0	58.6	58.4	56.9	59.2	54.4	58.3
Fixed Assets Original Value	138.3	108.5	212.4	173.0	156.3	125.0	125.7	115.9	119.1	109.4
Accumulated Depreciation	-98.3	-73.7	-171.4	-130.6	-116.6	-86.5	-84.6	-82.7	-75.8	-70.3
Net Fixed Assets	40.0	34.8	41.0	42.4	39.7	38.5	41.1	33.2	43.3	39.1
Other Noncurrent Assets	2.8	1.8	0.6	2.6	1.7	3.1	2.0	7.7	2.4	2.6
Total Assets	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Liabilities and Net Worth										
Accounts Payable	7.9%	6.3%	10.0%	5.2%	6.0%	10.1%	7.0%	6.3%	9.7%	8.1%
Notes Payable	4.8	1.2	7.5	3.4	3.5	15.2	5.7	5.7	1.0	1.3
Other Current Liabilities	8.1	7.7	2.3	4.1	7.1	7.5	12.4	7.9	8.8	6.3
Total Current Liabilities	20.8	15.2	19.8	12.7	16.6	32.8	25.1	19.9	19.5	15.7
Long Term Liabilities	15.4	13.7	29.1	19.9	19.1	20.7	12.9	6.6	14.5	21.1
Net Worth Or Owner Equity	63.8	71.1	51.1	67.4	64.3	46.5	62.0	73.5	66.0	63.2
Total Liabilities and Net Worth	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%