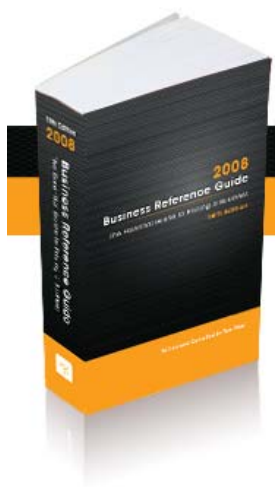


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Manufacturing -- General

SIC: Unavailable**NAICS:** 31**Number of Businesses / Units:** 11,500

The Sector as a Whole

The Manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The assembling of component parts of manufactured products is considered manufacturing, except in cases where the activity is appropriately classified in Sector 23, Construction.

Establishments in the Manufacturing sector are often described as plants, factories, or mills and characteristically use power-driven machines and materials-handling equipment. However, establishments that transform materials or substances into new products by hand or in the worker's home and those engaged in selling to the general public products made on the same premises from which they are sold, such as bakeries, candy stores, and custom tailors, may also be included in this sector. Manufacturing establishments may process materials or may contract with other establishments to process their materials for them. Both types of establishments are included in manufacturing.

The materials, substances, or components transformed by manufacturing establishments are raw materials that are products of agriculture, forestry, fishing, mining, or quarrying as well as products of other manufacturing establishments. The materials used may be purchased directly from producers, obtained through customary trade channels, or secured without recourse to the market by transferring the product from one establishment to another, under the same ownership.

The new product of a manufacturing establishment may be finished in the sense that it is ready for utilization or consumption, or it may be semifinished to become an input for an establishment engaged in further manufacturing. For example, the product of the alumina refinery is the input used in the primary production of aluminum; primary aluminum is the input to an aluminum wire drawing plant; and aluminum wire is the input for a fabricated wire product manufacturing establishment.

The subsectors in the Manufacturing sector generally reflect distinct production processes related to material inputs, production equipment, and employee skills. In the machinery area, where assembling is a key activity, parts and accessories for manufactured products are classified in the industry of the finished manufactured item when they are made for separate sale. For example, a replacement refrigerator door would be classified with refrigerators and an attachment for a piece of metal working machinery would be classified with metal working machinery. However, components, input from other manufacturing establishments, are classified based on the production function of the component manufacturer. For example, electronic components are classified in Subsector 334, Computer and Electronic Product Manufacturing and stampings are classified in Subsector 332, Fabricated Metal Product Manufacturing.

Manufacturing establishments often perform one or more activities that are classified outside the Manufacturing sector of NAICS. For instance, almost all manufacturing has some captive research and development or administrative operations, such as accounting, payroll, or management. These captive services are treated the same as captive manufacturing activities. When the services are provided by separate establishments, they are classified to the NAICS sector where such services are primary, not in manufacturing.

The boundaries of manufacturing and the other sectors of the classification system can be somewhat blurry. The establishments in the manufacturing sector are engaged in the transformation of materials into new products. Their output is a new product. However, the definition of what constitutes a new product can be somewhat subjective. As clarification, the following activities are considered manufacturing in NAICS:

Milk bottling and pasteurizing; Grinding of lenses to prescription;
 Water bottling and processing; Wood preserving;
 Fresh fish packaging (oyster shucking, Electroplating, plating, metal heat fish filleting); treating, and polishing for the trade;
 Apparel jobbing (assigning of materials Lapidary work for the trade; to contract factories or shops for Fabricating signs and advertising displays; fabrication or other contract operations) Rebuilding or remanufacturing as well as contracting on materials owned by others; machinery (i.e., automotive parts)
 Printing and related activities; Ship repair and renovation;

Ready-mixed concrete production; Machine shops; and
Leather converting; Tire retreading.

Conversely, there are activities that are sometimes considered manufacturing, but which for NAICS are classified in another sector (i.e., not classified as manufacturing). They include:

1. Logging, classified in Sector 11, Agriculture, Forestry, Fishing and Hunting is considered a harvesting operation;
2. The beneficiating of ores and other minerals, classified in Sector 21, Mining, is considered part of the activity of mining;
3. The construction of structures and fabricating operations performed at the site of construction by contractors, is classified in Sector 23, Construction;
4. Establishments engaged in breaking of bulk and redistribution in smaller lots, including packaging, repackaging, or bottling products, such as liquors or chemicals; the customized assembly of computers; sorting of scrap; mixing paints to customer order; and cutting metals to customer order, classified in Sector 42, Wholesale Trade or Sector 44-45, Retail Trade, produce a modified version of the same product, not a new product; and
5. Publishing and the combined activity of publishing and printing, classified in Sector 51, Information, perform the transformation of information into a product where as the value of the product to the consumer lies in the information content, not in the format in which it is distributed (i.e., the book or software diskette).

Rules of Thumb

60 to 70 percent of annual sales

4 to 5 times SDE (depending on size & quality) & inventory is included

4 to 5 times SDE; must manufacture product; not be a job shop

3 to 4 times EBIT

Hard Assets + 1.5 to 2 times EBIT

4 to 4.5 times EBITDA

General Information

"Manufacturing will not totally disappear in the U.S. Yes, our industrial base has been decimated and is being farmed offshore where cheap labor can be found, but there are thriving industries in medical, computer-related, bio-chemical, bio-medical, pharmaceutical, leisure and many other segments."

"Research the competition"

"The ability to grow the company is a big factor."

Expert Ratings

▶ Competition	1.5	(1=Lot of : 4= Not Much)
▶ Amount of Risk	2	(1=Very : 4= Not Much)
▶ Historical Profit Trend	2.8	(1=Down : 4= Up)
▶ Location & Facilities	2	(1=Poor : 4= Excellent)
▶ Marketability	3.4	(1=Low : 4= High)
▶ Industry Trend	2.4	(1=Declining : 4= Growing)
▶ Ease of Replication	2	(1=Easy : 4= Difficult)

Expert Comments

"Niche products companies do very well."

"Manufacturing is typically a complex and expensive process, creating barriers to entry."

"The risk level is the most important factor in determining a multiple of earnings."

"I find that manufacturing facilities and more technological systems are much improved over the last 20 years. Cadcam systems and computerized equipment have greatly improved productivity in the industry. When I first started selling mfg, low-tech processes and poor working facilities were the rule."

Pricing Tips

"Companies with larger EBITDA's command higher multiples."

"Multiple would vary depending upon EBITDA range. For EBITDA's in excess of 4 million you might see a multiple of 4.5 or 5. EBITDA above \$5 million would normally be a multiple of 6 or more."

"Valuation is predicated on many variables and rules of thumbs should be used as a baseline or starting point. Companies with patented products, proprietary methods etc., would likely see higher multiples and those in highly competitive industries with significant price pressures and little or no product differentials would see lower multiples."

"Most accurate method is to deduct cost of professional employees to replace current ownership, and then use a multiple of 4 to 6 times net earnings (EBIT) depending on industry, security of earnings, assets, growth potential, etc."

"Multiple of EBITDA will range from 3 to 5 depending upon EBITDA. Multiple of 3 to 4 for EBITDA under \$1 million, and 4 to 5 for EBITDA over \$1 million."

"The industry position and growth potential and exclusivity are other crucial factors. Age of equipment, trade name/branding, and intellectual properties also have a weight in determining value. Further considerations are leases or age of facilities, location, growth potential, backlog, contracts, relationships with suppliers, availability of credit lines. etc."

"We look at the calculation for owner benefit/cash flow and apply a 2 to 3 times multiple plus the current market value of furniture, fixtures and equipment and inventory at cost. Since manufacturing is very equipment intensive, using a pure EBITDA or cash flow multiplier does not adequately give a fair evaluation, in our opinion."

"Transferability of the customer base and maintenance capital expenditures are the two biggest issues to close a deal."

Benchmarks

"Sales per employee: \$100,000

"Proprietary products are most important."

"No customer bigger than 20%"

"Gross margin >45%; Inventory turns >4"

Expenses as a Percentage of Sales

"Every business is unique, but China is a big factor in California deals."

"High labor costs in U.S., relative to foreign labor, have affected manufacturing sector."

▶ Cost Of Goods	50%
▶ Payroll/Labor Costs	10%
▶ Occupancy Costs	5% to 10%
▶ Profit (pretax)	5% to 10%

Seller Financing

"3 to 6 Years"

Questions

"Who is the competition? Who does the sales?"

"Inventory breakdown (WIP, raw FG), customer deposits, machinery & fixtures, number of customers, key employees, receivables (amount & days) and method of sales & distribution—all affect whether the multiple is high or low. Stock or asset sale is a function as to whether or not it is a C corporation. Most manufacturers selling are 20-plus years old and therefore are C corporations, which means a stock sale."

"How is your business protected from off-shore competition?"

"Insurance considerations—is the business properly insured?"
"Value and margin of backlog; asset value and basis for value; product line breakdown & mix; 3 to 5 years P&L and balance sheets." "What are the capital expenditures required to maintain and grow the business?"

Industry Trend

"Consolidation, owners are getting old."

"Companies protected from off-shoring will command higher prices."

"Niche businesses can grow rapidly. Some will be converted to distribution companies as the manufacturing process is moved overseas."

"Certain niche manufacturers where expertise cannot be taken offshore will survive. Reasonable labor availability will be critical."

"Continued slow decline"

"As the economy picks up, manufacturers will start being profitable again."

"About the same; some sectors (labor-cost sensitive) will go down; other sectors (technology, medical equipment., etc.) will go up." "Volume will be the same, with profit margins declining, due to an increase in labor and other operational costs."

"Many manufacturing companies have gone offshore, and we are left with the smaller and more closely held companies. On a resale basis, mfg. is much in demand and supply is low."

"Outsourcing is putting a strain on manufacturing, as well as high labor and insurance costs."

"China will continue to pose big, long-term pressures."

Advantages

- ▶ "Niche product companies are defensible"
- ▶ "If US-based, then typically will have high level of value added component."
- ▶ "A well-run company can be very profitable—10%–25% EBITDA."
- ▶ "Close to total control over your production. The only outside influences that can affect your process are outside suppliers and competition. All other factors are within. Great liquidity of the business because of market demand."
- ▶ "Skilled labor force."
- ▶ "Lots of assets and consolidation savings."
- ▶ "One of few actual wealth-creating activities."

Disadvantages

- ▶ "Overseas manufacturers are putting pressure on pricing."
- ▶ "Trend for overseas manufacturing is growing for certain products."
- ▶ "Labor-market changes and interest-rate fluctuations can invariably choke the financial lifeblood out of any industry. Proper projections and calculations are critical."
- ▶ "Employee turnover in the lower paid jobs. At times, more employee oversight is needed due to interaction with equipment."
- ▶ "Outsourcing, higher labor costs, insurance, competition."
- ▶ "China again is the main problem for West Coast deals."
- ▶ "Strong competition in all segments."

