

# Research Report

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*Fizone*

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ELECTRONIC INSTRUMENTS  
& CONTROLS

**NASDAQ: RAVN**  
**PRICE: \$33.34**  
**TARGET \$54.00**

## Executive Summary

Fizone does not issue blanket ratings such as buy, sell, or hold. In order to understand if an investor should make any investment it is first essential to understand the objectives of the investor and the suitability of the investment for the investor.

**Raven Industries represents an attractive buying opportunity for an investor for whom a suitable investment could have the following profile:**

- Small cap stock with low daily trading volumes
- Manufacturing company with three very different business activities
- Potential for growth above GDP levels in all business segments
- History of slow growth
- Recent change in management and strategy
- Approximate 2% dividend payout with history of increasing dividends
- Three year investment horizon to achieve target price objective

The factors that separate Raven Industries from other firms with similar profiles are:

- Low Price/Earnings, Price/Sales, and Price/Book ratios
- High ROE, ROA, and Gross Margin
- Low Payout Ratio of 25%

Diversification and growth expectations in all business segments will drive earnings. In August of 2000 a new CEO took office and adopted a business strategy of "shrink, fix, grow". So far management has shown an ability to deliver on that strategy. By placing increased focus on improving margins the business has been shrunk by selling or closing down nonproductive assets. Business units have been reorganized to meet changing product needs, and increased capital investments have been made in profitable business segments. New business alliances have been forged, innovative products have been introduced, and the company continues to look for acquisitions to augment current businesses.

### Stock Data

|                          |                 |
|--------------------------|-----------------|
| 36-Month Price Target    | \$54.00         |
| 52-Week Range            | \$33.50 - 17.49 |
| 10-Day Avg. Daily Volume | 8,000           |

### Capitalization

|                            |            |
|----------------------------|------------|
| Shares Outstanding (MM)    | 4.58       |
| Market Capitalization (MM) | \$152.5    |
| Cash/Share                 | \$2.73     |
| Debt/Equity                | 0.02       |
| 2 for 1 split effective    | 01/15/2003 |

### Revenues

|                 |         |         |         |
|-----------------|---------|---------|---------|
| FY ends January | 2002A   | 2003E   | 2004E   |
| Revenue (MM)    | \$118.5 | \$121.2 | \$128.0 |
| Price/Revenue   | 1.31    | 1.27    | 1.20    |

### Earnings Per Share\*(diluted)

|             |        |        |        |
|-------------|--------|--------|--------|
| Fiscal Year | \$1.86 | \$2.09 | \$2.34 |
| P/E         | 17.88  | 15.96  | 14.24  |

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## Company Overview & History

Raven Industries was founded in 1956 as a manufacturer of high-altitude research balloons for NASA. It has leveraged the experience gained from its beginnings as a manufacturer of high altitude balloons to grow into a diversified manufacturing company with significant operations in three different business segments and one subsidiary. Its three business segments are engineered films, electronic systems, and flow controls. The engineered films division manufactures specialty polyethylene films used in several industries including construction, agriculture, and manufactured housing. The electronic systems division is an ISO certified manufacturer that focuses on industrial controls and instrumentation, aerospace/aviation and communication industries. The flow control division manufactures standard fluid control valves in addition to a variety of specialty devices for farming applications. Its Aerostar Subsidiary is transitioning from garment manufacturing to sewing and sealing of technology-based products such as balloons and parachutes. During its 46-year history Raven has had three CEOs with the transition to the third, Ronald Moquist, taking place in 2000. Today Raven's diverse business divisions operate independently.

### Three-Year Historical Price Chart



### Engineered Films Division

The reinforced plastic sheeting industry is increasingly competitive on a global level. Raven has focused on large scale extruded products for the housing, manufactured home, agriculture, oil exploration, and industrial markets. This focus has allowed Raven to compete in a market segment with slightly higher margins and less competition due to the capital investment required for large extrusion equipment. The overall market for reinforced plastic sheeting grew at about 6% during the 1990s slightly ahead of overall economic growth. Forecasts by the Freedonia Group, Inc., a Cleveland-based industrial market research firm, call for 3% annual increases through 2005. This is in line with most growth forecasts for the overall economy. Due to a recent capital investment in new extrusion equipment Raven expects sales in this segment to grow by 10% in 2003. This growth may be possible as long as the housing industry stays strong. However, sales gains will be offset by the increased depreciation burden of the new equipment and additional sales costs associated with attempts to enter new markets. This division could experience exceptional performance if there is an expansion of applications for commercial high-altitude research balloons. Raven is a recognized world leader in this area and is the only source in the U.S. for scientific balloons. Based on historical averages and recent capital investments a growth rate of 6% per year for the next four years has been used to project earnings for this division.

### **Electronic Systems Division**

The electronic systems industry is a diverse global business. Raven focuses on electronics manufacturing services for North American original equipment manufacturers and Fortune 500 companies that contract small volume products. Its strategy is to provide superior quality and service to the industrial controls and instrumentation, aerospace/aviation and communication industries. By doing this it has been able to achieve higher margins. As it improves, it gains experience and improves productivity in niche markets. Despite the recent economic slowdown the growth in the electronics industry as reported by the Bureau of Economic Analysis was over 19% per year between 1995 and 2000. The Electronics Manufacturing Market is projected in a variety of surveys to grow at a pace near 20% per year for the next several years. Raven's customers expect to grow their businesses in the 7% - 12% range during 2003. Raven has shown strong growth in this division. The growth rate of 12% over the next four years that has been used for this report is considered conservative.

### **Flow Controls Division**

The flow control industry consists of smaller, more specialized markets than Raven's other businesses. In this sector Raven focuses on agricultural products with related products for golf turf maintenance and road anti-icing. According to the U.S. Department of Agriculture total productivity growth in the agricultural industry has lagged overall GDP growth for the past four decades. This growth is now only about 2% per year. This does not bode well as a foundation for growth in this division. However, controlling the application of costly chemicals in the farming process has two benefits. One is that the flow control devices can show a good return on investment, and the other is that they can also help in controlling the application of chemicals that will increasingly come under environmental regulation. In the near term Raven expects flat sales, and this seems reasonable in a weak economy. However, their products could achieve growing acceptance in a market with few participants. A growth rate of 4% has been used in this analysis. This growth is slightly ahead of projections for the overall economy and is based on early acceptance of new products.

### **Aerostar Subsidiary**

Due to intense pressure from overseas manufacturers Aerostar has shifted its focus from outerwear products such as skiwear and hunting outerwear to the manufacture of specialty items that require a higher degree of technical manufacturing expertise. It is believed that the manufacture of these items is less likely to move offshore. This change resulted in one time charges for the closing of two of the division's five sewing plants in 2001. Narrower sales declines are expected through 2003 due to the outerwear business. The remaining base of inflatable and other marketing products has recently been augmented by military contracts for cargo parachutes used for military and humanitarian efforts. This shift in product focus should provide increased efficiency, improved profitability, and higher margins in this division. In addition, the effects of seasonal factors associated with outerwear manufacturing will be reduced. However, these gains will be offset by higher insurance premiums for hot-air balloon products and an increased dependence on government contracts. Sales growth in this division is expected to keep pace with the economy, and a growth rate of 3% has been used in this analysis.

### **Recent Divestitures, Reorganizations, Alliances, & Acquisitions**

In 2000 two sportswear manufacturing plants in South Dakota were closed. The remainder of the sportswear division was later merged into Raven's Aerostar Subsidiary. In 2000 the plastic tank division was sold to Norwesco, Inc. The Electronic Systems Division has refocused on fewer, stronger customers. In 2000 it signed a major five-year manufacturing agreement to provide Motorola with secured telephony and network devices. In late 2001 this division acquired System Integrators, a private electronic manufacturing services company. At the same time the Global Positioning System (GPS) provider, Starlink, was acquired and integrated into the Flow Controls Division. In July 2002 strategic alliances were formed with two software companies to provide applications for hand held computers to monitor chemical application processes in the farming industry. In June 2002 the Beta Raven subsidiary was sold to California Pellet Mill. These actions have shown a new focus by management to shed non-productive assets and to acquire companies that will integrate well with its current product mix.

## Financial Discussion

The Raven business strategy of “shrink, fix, grow” has been used as a foundation to construct the models used for evaluation. This means that businesses sold or for sale have been separated from the current, ongoing business in doing valuations.

### Historical Earnings

|                                     | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 1 Yr.  | 5 Yr.  |
|-------------------------------------|---------|---------|---------|---------|---------|---------|--------|--------|
| <b>Revenue</b>                      |         |         |         |         |         |         |        |        |
| <b>Electronic Systems Division</b>  | 22,133  | 23,968  | 24,958  | 30,175  | 32,039  | 32,289  | 0.8%   | 7.8%   |
| <b>Flow Controls Division</b>       | 16,689  | 16,852  | 15,311  | 13,520  | 16,758  | 23,178  | 38.3%  | 6.8%   |
| <b>Engineered Films Division</b>    | 26,625  | 28,322  | 32,514  | 35,889  | 40,004  | 40,280  | 0.7%   | 8.6%   |
| <b>Aerostar</b>                     | 36,422  | 35,347  | 35,625  | 28,277  | 24,559  | 16,271  | -33.7% | -14.9% |
| <b>Revenue from Ongoing Oper.</b>   | 101,869 | 104,489 | 108,408 | 107,861 | 113,360 | 112,018 | -1.2%  | 1.9%   |
| <b>Divisions Sold or For Sale</b>   | 39,576  | 47,679  | 46,798  | 42,523  | 19,498  | 6,497   | -66.7% | -30.3% |
| <b>Net Sales</b>                    | 141,445 | 152,168 | 155,206 | 150,384 | 132,858 | 118,515 | -10.8% | -3.5%  |
| <b>- Cost of Goods Sold</b>         | 116,158 | 127,239 | 130,765 | 126,167 | 111,735 | 94,664  | -15.3% | -4.0%  |
| <b>Gross Profit</b>                 | 25,287  | 24,929  | 24,441  | 24,217  | 21,123  | 23,851  | 12.9%  | -1.2%  |
| <b>Sales, General, &amp; Admin.</b> | 13,316  | 14,367  | 15,142  | 14,826  | 13,883  | 11,043  | -20.5% | -3.7%  |
| <b>Operating income</b>             |         |         |         |         |         |         |        |        |
| <b>Ongoing Operations</b>           | 9,321   | 9,555   | 8,220   | 8,521   | 9,907   | 13,906  | 40.4%  | 8.3%   |
| <b>Divisions Sold or For Sale</b>   | 2,650   | 1,007   | 1,453   | 2,606   | 3,331   | (613)   | 118.4% | 174.6% |
| <b>Nonrecurring</b>                 | -       | -       | -       | (550)   | (2,490) | (118)   | -95.3% | N/M    |
| <b>Operating Income</b>             | 11,971  | 10,562  | 9,673   | 10,577  | 10,748  | 13,175  | 22.6%  | 1.9%   |
| <b>+ Other Income</b>               | 254     | 2,301   | 450     | 344     | 434     | 519     | 19.6%  | 15.4%  |
| <b>EBIT</b>                         | 12,225  | 12,863  | 10,123  | 10,921  | 11,182  | 13,694  | 22.5%  | 2.3%   |
| <b>- Interest Expenses</b>          | 310     | 323     | 474     | 418     | 258     | 129     | -50.0% | -16.1% |
| <b>Pretax Income</b>                | 11,915  | 12,540  | 9,649   | 10,503  | 10,924  | 13,565  | 24.2%  | 2.6%   |
| <b>- Income Taxes</b>               | 4,227   | 4,478   | 3,467   | 3,741   | 4,513   | 4,718   | 4.5%   | 2.2%   |
| <b>Tax Rate</b>                     | 35.5%   | 35.7%   | 35.9%   | 35.6%   | 41.3%   | 34.8%   | -15.8% | -0.4%  |
| <b>Net Income</b>                   | 7,688   | 8,062   | 6,182   | 6,762   | 6,411   | 8,847   | 38.0%  | 2.8%   |
| <b>Total Depreciation</b>           | 4,566   | 5,137   | 5,133   | 4,884   | 3,667   | 3,145   | -14.2% | -7.2%  |
| <b>EBITDA</b>                       | 16,791  | 18,000  | 15,256  | 15,805  | 14,849  | 16,839  | 13.4%  | 0.1%   |
| <b>Shares outstanding (000's)</b>   | 4,739   | 4,843   | 4,751   | 6,557   | 5,167   | 4,655   | -9.9%  | -0.4%  |
| <b>Diluted Shares Outstanding</b>   | 4,775   | 4,891   | 4,757   | 6,558   | 5,169   | 4,746   | -8.2%  | -0.1%  |
| <b>Earnings Per Share</b>           |         |         |         |         |         |         |        |        |
| <b>Basic</b>                        | \$1.62  | \$1.66  | \$1.30  | \$1.03  | \$1.24  | \$1.90  | 53.2%  | 3.2%   |
| <b>Diluted</b>                      | \$1.61  | \$1.65  | \$1.30  | \$1.03  | \$1.24  | \$1.86  | 50.3%  | 3.0%   |

Source: Raven Industries Annual Reports and SEC Edgar Filings

Raven does not have a history of high levels of non-recurring or reorganization charges. Research and Development costs over the past three years have averaged \$900,000 per year. These costs are included in the cost of goods sold in the year in which they are incurred. These costs have been consistent on an annual basis and are relatively low. Therefore they have not been shown as a separate item in this analysis. As shown by the closeness of the shares outstanding and diluted shares outstanding, Raven has not had a very high level of options outstanding. In addition, a reduction in shares outstanding over the past few years indicates an aggressive stock buyback program. Further discussion of revenue and cost trends will be given below in the discussion of the common size financials.

## Earnings Forecast

As explained above separate revenue growth rates have been used for the independent divisions and subsidiary. These forecasts could be significantly impacted by future acquisitions or divestitures, but the company has no announced plans at this point. Raven does not provide a breakout of costs of goods sold. The 5% value used is about 2.3% below the weighted average for revenue growth. Historically this difference has only been .5%, but it was 4.5% in the past year after nonperforming businesses were sold. Selling, general, and administrative expenses are also not broken out. These expenses are expected to keep pace with overall economic growth after recent cutbacks. The company has paid off virtually all of its debt and intends to use this as a cushion as future needs dictate. Therefore, only minimal interest expenses have been projected. Outstanding shares are expected to remain at current levels as option grants are relatively small and some buybacks will continue. Depreciation will increase next year due to the deployment of capacity in the Engineered Films Division.

|                                     | 2002    | 2003E   | 2004E   | 2005E   | 2006E   | Forecast & Explanation |                            |
|-------------------------------------|---------|---------|---------|---------|---------|------------------------|----------------------------|
| <b>Revenue</b>                      |         |         |         |         |         |                        |                            |
| <b>Electronic Systems Division</b>  | 32,289  | 36,164  | 40,503  | 45,364  | 50,807  | 12.0%                  | Industry growth resumes    |
| <b>Flow Controls Division</b>       | 23,178  | 24,105  | 25,069  | 26,072  | 27,115  | 4.0%                   | Slow growth in agriculture |
| <b>Engineered Films Division</b>    | 40,280  | 42,697  | 45,259  | 47,974  | 50,853  | 6.0%                   | Slower than past 5 yrs.    |
| <b>Aerostar</b>                     | 16,271  | 16,759  | 17,262  | 17,780  | 18,313  | 3.0%                   | New strategy ends slide    |
| <b>Revenue from Ongoing Oper.</b>   | 112,018 | 119,725 | 128,093 | 137,190 | 147,088 |                        |                            |
| <b>Divisions Sold or For Sale</b>   | 6,497   | 1,523   |         |         |         |                        | Sale of Beta Raven         |
| <b>Net Sales</b>                    | 118,515 | 121,248 | 128,093 | 137,190 | 147,088 |                        |                            |
| <b>- Cost of goods sold</b>         | 94,664  | 95,000  | 99,750  | 104,738 | 109,974 | 5.0%                   | Flat from sale, then slow  |
| <b>Gross Profit</b>                 | 23,851  | 26,248  | 28,343  | 32,452  | 37,114  |                        |                            |
| <b>Sales, General, &amp; Admin.</b> | 11,043  | 11,374  | 11,716  | 12,067  | 12,429  | 3.0%                   | Matching economy           |
| <b>Operating income</b>             |         |         |         |         |         |                        |                            |
| <b>Ongoing Operations</b>           | 13,906  | 14,873  | 16,628  | 20,385  | 24,685  |                        |                            |
| <b>Divisions Sold or For Sale</b>   | (613)   |         |         |         |         |                        | No plans announced         |
| <b>Nonrecurring</b>                 | (118)   |         |         |         |         |                        | Restructuring is over      |
| <b>Operating Income</b>             | 13,175  | 14,873  | 16,628  | 20,385  | 24,685  |                        |                            |
| <b>+ Other Income</b>               | 519     | 400     | 400     | 400     | 400     |                        | Average from last 3 yrs.   |
| <b>EBIT</b>                         | 13,694  | 15,273  | 17,028  | 20,785  | 25,085  |                        |                            |
| <b>- Interest Expenses</b>          | 129     | 100     | 100     | 100     | 100     |                        | Short-term debt only       |
| <b>Pretax Income</b>                | 13,565  | 15,173  | 16,928  | 20,685  | 24,985  |                        |                            |
| <b>- Income Taxes</b>               | 4,718   | 5,311   | 5,925   | 7,240   | 8,745   |                        | Historical in near 35%     |
| <b>Tax Rate</b>                     | 34.8%   | 35.0%   | 35%     | 35%     | 35%     |                        |                            |
| <b>Net Income</b>                   | 8,847   | 9,863   | 11,003  | 13,445  | 16,240  |                        |                            |
| <b>Total Depreciation</b>           | 3,145   | 3,700   | 4,000   | 4,200   | 4,200   |                        | Capital investment level   |
| <b>EBITDA</b>                       | 16,839  | 18,973  | 21,028  | 24,985  | 29,285  |                        |                            |
| <b>Shares outstanding (000's)</b>   | 4,655   | 4,632   | 4,609   | 4,586   | 4,563   | -0.5%                  | Buybacks exceed options    |
| <b>Diluted Shares outstanding</b>   | 4,746   | 4,722   | 4,698   | 4,675   | 4,652   | -0.5%                  | Limited new grants         |
| <b>Earnings Per Share</b>           |         |         |         |         |         |                        |                            |
| <b>Basic</b>                        | \$1.90  | \$2.13  | \$2.39  | \$2.93  | \$3.56  |                        |                            |
| <b>Diluted</b>                      | \$1.86  | \$2.09  | \$2.34  | \$2.88  | \$3.49  |                        |                            |

Source: estimates

## Common Size Income Statement

|                                     | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003E | 2004E | 2005E | 2006E |
|-------------------------------------|------|------|------|------|------|------|-------|-------|-------|-------|
| <b>Revenue</b>                      |      |      |      |      |      |      |       |       |       |       |
| <b>Electronic Systems Division</b>  | 16%  | 16%  | 16%  | 20%  | 24%  | 27%  | 30%   | 32%   | 33%   | 35%   |
| <b>Flow Controls Division</b>       | 12%  | 11%  | 10%  | 9%   | 13%  | 20%  | 20%   | 20%   | 19%   | 18%   |
| <b>Engineered Films Division</b>    | 19%  | 19%  | 21%  | 24%  | 30%  | 34%  | 35%   | 35%   | 35%   | 35%   |
| <b>Aerostar</b>                     | 26%  | 23%  | 23%  | 19%  | 18%  | 14%  | 14%   | 13%   | 13%   | 12%   |
| <b>Revenue from Ongoing Oper.</b>   | 72%  | 69%  | 70%  | 72%  | 85%  | 95%  | 99%   | 100%  | 100%  | 100%  |
| <b>Divisions Sold or For Sale</b>   | 28%  | 31%  | 30%  | 28%  | 15%  | 5%   | 1%    | 0%    | 0%    | 0%    |
| <b>Net Sales</b>                    | 100% | 100% | 100% | 100% | 100% | 100% | 100%  | 100%  | 100%  | 100%  |
| <b>- Cost of goods sold</b>         | 82%  | 84%  | 84%  | 84%  | 84%  | 80%  | 78%   | 78%   | 76%   | 75%   |
| <b>Gross Profit</b>                 | 18%  | 16%  | 16%  | 16%  | 16%  | 20%  | 22%   | 22%   | 24%   | 25%   |
| <b>Sales, General, &amp; Admin.</b> | 9%   | 9%   | 10%  | 10%  | 10%  | 9%   | 9%    | 9%    | 9%    | 8%    |
| <b>Operating income</b>             | 0%   | 0%   | 0%   | 0%   | 0%   | 0%   | 0%    | 0%    | 0%    | 0%    |
| <b>Ongoing Operations</b>           | 7%   | 6%   | 5%   | 6%   | 7%   | 12%  | 12%   | 13%   | 15%   | 17%   |
| <b>Divisions Sold or For Sale</b>   | 2%   | 1%   | 1%   | 2%   | 3%   | -1%  | 0%    | 0%    | 0%    | 0%    |
| <b>Nonrecurring</b>                 | 0%   | 0%   | 0%   | 0%   | -2%  | 0%   | 0%    | 0%    | 0%    | 0%    |
| <b>Operating Income</b>             | 8%   | 7%   | 6%   | 7%   | 8%   | 11%  | 12%   | 13%   | 15%   | 17%   |
| <b>+ Other Income</b>               | 0%   | 2%   | 0%   | 0%   | 0%   | 0%   | 0%    | 0%    | 0%    | 0%    |
| <b>EBIT</b>                         | 9%   | 8%   | 7%   | 7%   | 8%   | 12%  | 13%   | 13%   | 15%   | 17%   |
| <b>- Interest Expenses</b>          | 0%   | 0%   | 0%   | 0%   | 0%   | 0%   | 0%    | 0%    | 0%    | 0%    |
| <b>Pretax Income</b>                | 8%   | 8%   | 6%   | 7%   | 8%   | 11%  | 13%   | 13%   | 15%   | 17%   |
| <b>- Income Taxes</b>               | 3%   | 3%   | 2%   | 2%   | 3%   | 4%   | 4%    | 5%    | 5%    | 6%    |
| <b>Tax Rate</b>                     | 0%   | 0%   | 0%   | 0%   | 0%   | 0%   | 0%    | 0%    | 0%    | 0%    |
| <b>Net Income</b>                   | 5%   | 5%   | 4%   | 4%   | 5%   | 7%   | 8%    | 9%    | 10%   | 11%   |
| <b>Total Depreciation</b>           | 3%   | 3%   | 3%   | 3%   | 3%   | 3%   | 3%    | 3%    | 3%    | 3%    |
| <b>EBITDA</b>                       | 12%  | 12%  | 10%  | 11%  | 11%  | 14%  | 16%   | 16%   | 18%   | 20%   |

Source: Raven Industries Annual Reports, SEC Edgar Filings, and estimates

Raven has shifted its revenue focus significantly over the past few years. The contribution from the Electronic Systems Division has grown nearly 70% in the past three years, and will continue to grow to be over one-third of revenue. This has come largely at the expense of the Aerostar Subsidiary. This has been driven by the higher margins in electronic manufacturing services and foreign manufacturing in the sportswear business. Revenues from the Engineered Films Division while growing at a slower pace will equal revenues from the Electronic Systems Division in four years. Contributions from the Flow Control Division will remain relatively flat due to a difficult agricultural market. As Raven continues to gain experience in new markets and continues its focus on market niches, it will drive down costs of goods sold as a percent of revenue. It should be able to maintain sales, general, administrative costs at current or slightly lower levels.

## Balance Sheet

|   | 1,997  | 1,998  | 1,999  | 2,000  | 2,001  | 2,002  |
|---|--------|--------|--------|--------|--------|--------|
| <b>Current Assets</b>                             |        |        |        |        |        |        |
| Cash & equivalents                                | 3,439  | 2,850  | 5,335  | 5,707  | 10,673 | 7,478  |
| Accounts Receivables                              | 25,637 | 26,973 | 27,399 | 22,717 | 19,274 | 16,427 |
| Inventories                                       | 25,125 | 25,816 | 25,978 | 24,462 | 18,983 | 19,082 |
| Deferred Income Taxes                             | 2,064  | 1,686  | 1,732  | 1,919  | 2,516  | 1,927  |
| Other Current & Prepaid Expenses                  | 431    | 506    | 417    | 566    | 371    | 394    |
| <b>Total Current Assets</b>                       | 56,696 | 57,831 | 60,861 | 55,371 | 51,817 | 45,308 |
| <b>Fixed Assets</b>                               | 18,142 | 19,817 | 19,563 | 15,068 | 11,647 | 14,059 |
| <b>Other Assets</b>                               | 5,824  | 4,942  | 3,250  | 3,608  | 2,192  | 8,469  |
| <b>Total Assets</b>                               | 80,662 | 82,590 | 83,674 | 74,047 | 65,656 | 67,836 |
| <b>Current Liabilities</b>                        |        |        |        |        |        |        |
| Short term debt and Current LT debt               | 1,366  | 1,765  | 1,060  | 1,044  | 1,012  | 127    |
| Accounts Payable                                  | 7,849  | 7,480  | 5,993  | 5,320  | 3,490  | 4,801  |
| Accrued Liabilities                               | 10,197 | 9,327  | 9,245  | 7,721  | 8,727  | 8,179  |
| Customer Advances                                 | 604    | 803    | 494    | 617    | 706    | 703    |
| <b>Total Current Liabilities</b>                  | 20,016 | 19,375 | 16,792 | 14,702 | 13,935 | 13,810 |
| <b>Other Long Term Liabilities</b>                | 736    | 524    | 17     | 1,802  | 1,719  | 1,714  |
| <b>Long-term Debt</b>                             | 3,181  | 1,128  | 4,572  | 3,024  | 2,013  | 280    |
| <b>Total Shareholder's Equity</b>                 | 56,729 | 61,563 | 62,293 | 54,519 | 47,989 | 52,032 |
| <b>Total Liabilities &amp; Shareholder Equity</b> | 80,662 | 82,590 | 83,674 | 74,047 | 65,656 | 67,836 |

Source: Raven Industries Annual Reports and SEC Edgar Filings

## Common Size Balance Sheet

|   | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|---|------|------|------|------|------|------|
| <b>Current Assets</b>                             |      |      |      |      |      |      |
| Cash & equivalents                                | 4%   | 3%   | 6%   | 8%   | 16%  | 11%  |
| Accounts Receivables                              | 32%  | 33%  | 33%  | 31%  | 29%  | 24%  |
| Inventories                                       | 31%  | 31%  | 31%  | 33%  | 29%  | 28%  |
| Deferred Income Taxes                             | 3%   | 2%   | 2%   | 3%   | 4%   | 3%   |
| Other Current & Prepaid Expenses                  | 1%   | 1%   | 0%   | 1%   | 1%   | 1%   |
| <b>Total Current Assets</b>                       | 70%  | 70%  | 73%  | 75%  | 79%  | 67%  |
| <b>Fixed Assets</b>                               | 22%  | 24%  | 23%  | 20%  | 18%  | 21%  |
| <b>Other Assets</b>                               | 7%   | 6%   | 4%   | 5%   | 3%   | 12%  |
| <b>Total Assets</b>                               | 100% | 100% | 100% | 100% | 100% | 100% |
| <b>Current Liabilities</b>                        |      |      |      |      |      |      |
| Short term debt and Current LT debt               | 2%   | 2%   | 1%   | 1%   | 2%   | 0%   |
| Accounts Payable                                  | 10%  | 9%   | 7%   | 7%   | 5%   | 7%   |
| Accrued Liabilities                               | 13%  | 11%  | 11%  | 10%  | 13%  | 12%  |
| Taxes payable                                     | 0%   | 0%   | 0%   | 0%   | 0%   | 0%   |
| Customer Advances                                 | 1%   | 1%   | 1%   | 1%   | 1%   | 1%   |
| <b>Total Current Liabilities</b>                  | 25%  | 23%  | 20%  | 20%  | 21%  | 20%  |
| <b>Other Long Term Liabilities</b>                | 1%   | 1%   | 0%   | 2%   | 3%   | 3%   |
| <b>Long-term Debt</b>                             | 4%   | 1%   | 5%   | 4%   | 3%   | 0%   |
| <b>Total Shareholder's Equity</b>                 | 70%  | 75%  | 74%  | 74%  | 73%  | 77%  |
| <b>Total Liabilities &amp; Shareholder Equity</b> | 100% | 100% | 100% | 100% | 100% | 100% |

Source: Raven Industries Annual Reports and SEC Edgar Filings

Positive developments on the balance sheet are a decrease in account receivable levels and a reduction in debt. In addition, shareholder equity has increased despite stock buybacks as a result of a reduction in the level of current liabilities. Cash levels have risen but not to a level that should cause concern.

## Statement of Cash Flows

|   | 1997           | 1998           | 1999           | 2000            | 2001            | 2002            |
|---|----------------|----------------|----------------|-----------------|-----------------|-----------------|
| <b>Cash Flows from Operating Activities</b>   |                |                |                |                 |                 |                 |
| Net Income                                    | 7,688          | 8,062          | 6,182          | 6,762           | 6,411           | 8,847           |
| Depreciation                                  | 4,566          | 5,137          | 5,133          | 4,884           | 3,667           | 3,145           |
| Other non-cash changes                        | (5,166)        | (3,925)        | (2,989)        | (1,271)         | (637)           | 6,504           |
| <b>Net Cash from Operations</b>               | <b>7,088</b>   | <b>9,274</b>   | <b>8,326</b>   | <b>10,375</b>   | <b>9,441</b>    | <b>18,496</b>   |
| <b>Cash Flows - Investing</b>                 |                |                |                |                 |                 |                 |
| Capital Expenditures                          | (4,009)        | (6,541)        | (4,606)        | (3,639)         | (3,090)         | (5,094)         |
| Other   | (1,081)        | 1,562          | 1,479          | 9,962           | 12,842          | (8,058)         |
| <b>Net Cash From Investing</b>                | <b>(5,090)</b> | <b>(4,979)</b> | <b>(3,127)</b> | <b>6,323</b>    | <b>9,752</b>    | <b>(13,152)</b> |
| <b>Cash Flows - Financing</b>                 |                |                |                |                 |                 |                 |
| Net issuance of debt                          | (203)          | (1,656)        | 2,738          | (1,564)         | (1,043)         | (3,602)         |
| Dividends Paid                                | (2,367)        | (2,709)        | (2,944)        | (2,895)         | (2,399)         | (2,371)         |
| Common Shares purchased                       | -              | (713)          | (2,608)        | (11,881)        | (10,829)        | (2,848)         |
| Other   | 207            | 194            | 100            | 14              | 44              | 282             |
| <b>Net Cash from Financing</b>                | <b>(2,363)</b> | <b>(4,884)</b> | <b>(2,714)</b> | <b>(16,326)</b> | <b>(14,227)</b> | <b>(8,539)</b>  |
| <b>Net Increase in Cash &amp; Equivalents</b> | <b>(365)</b>   | <b>(589)</b>   | <b>2,485</b>   | <b>372</b>      | <b>4,966</b>    | <b>(3,195)</b>  |
| <b>Change</b>                                 |                | <b>(224)</b>   | <b>3,074</b>   | <b>(2,113)</b>  | <b>4,594</b>    | <b>(8,161)</b>  |

Source: Raven Industries Annual Reports and SEC Edgar Filings

Net cash from operations has increased significantly as a result of an increase in net income and positive changes in operating assets and liabilities. Raven has used this cash to buyback its common shares and payoff debt. At the same time it has managed to pay consistent dividends. Capital expenditures had been on the decline, but they increased significantly last year.

## Valuation

The value of Raven Industries is analyzed below using several techniques. These techniques have all placed a value on Raven shares of between \$45.06 and \$55.13. Based on this a target price of \$54.00 has been assigned. Raven has begun to show a significant change in its operating results, but it is believed that it may take as long as three years for the market to adjust from the recent close of \$33.34. This would equate to a 17.5% annual increase in share price in addition to the current dividend yield of 1.68%. Raven has increased dividends in 11 of the past 12 years.

### Dividend Discount

Raven Industries is a mature company that has historically paid out a large portion of its earnings through dividends or stock buybacks. Therefore the dividend discount model is a viable option for valuating the firm. A change in management focus has given the firm an opportunity for a new growth spurt over the next four years. After that increased competition in the growing electronic manufacturing services industry will cause the firm to return to a stable growth phase. Therefore a two stage model will be used to value the firm.

The cost of capital used for the model was calculated from the Capital Asset Pricing Model using the following process:

- Average beta for the firms used in the industry comparison below = **.92**
- Unlevered beta for the group assuming 35% tax-rate and debt/equity average of .73 = **.62**
- Levered bottom beta for Raven as opposed to its current beta of .03. = **.65**
- Risk-free rate of (5.0%) + risk premium of (5.5%) \* beta (.65) = cost of equity (**8.57%**)

Overall model assumptions

- Diluted earnings per share from Earnings Model
- Expected growth rate = (1 - Payout Ratio) \* Return on Equity
- Cost of capital will remain constant
- Firm will continue stock buybacks to maintain ROE

|                             |       | Year           | EPS    | DPS     | PV             |
|-----------------------------|-------|----------------|--------|---------|----------------|
| <b>High Growth Period</b>   |       |                |        |         |                |
| Payout Ratio                | 0.50  | 2003           | \$2.09 | \$1.04  | \$0.96         |
| ROE                         | 0.16  | 2004           | \$2.34 | \$1.17  | \$0.99         |
| Growth                      | 0.08  | 2005           | \$2.88 | \$1.44  | \$1.12         |
| Cost of capital             | 8.57% | 2006           | \$3.49 | \$1.75  | \$1.26         |
| <b>Stable Growth Period</b> |       |                |        |         |                |
| Payout Ratio                | 0.67  | 2007           | \$3.68 | \$2.45  |                |
| ROE                         | 0.16  |                |        |         |                |
| Growth                      | 0.053 | Terminal price |        | \$75.64 | \$50.13        |
| Cost of capital             | 8.57% |                |        |         |                |
| <b>Total Current Value</b>  |       |                |        |         | <b>\$54.47</b> |

**Free Cash Flow to Firm**

Another way to calculate firm value is to discount all of the cash flows available to all stakeholders in the firm. In this case this gives a nearly identical value to the dividend discount model because debt is virtually zero.

Overall model assumptions

- EBIT(1-t) from earnings model
- Expected growth rate = Reinvestment rate \* Return on Capital
- Cost of capital will remain constant
- ROC nearly equals ROE because of no debt

|                                |        | Year                | EBIT(1-t) | FCFF    | PV             |
|--------------------------------|--------|---------------------|-----------|---------|----------------|
| <b>High Growth Period</b>      |        |                     |           |         |                |
| Reinvestment Rate              | 50.00% | 2003                | 9,928     | 4,964   | 4,572          |
| Tax Rate                       | 35.00% | 2004                | 11,068    | 5,534   | 4,694          |
| Growth                         | 8.00%  | 2005                | 13,510    | 6,755   | 5,278          |
| Cost of capital                | 8.57%  | 2006                | 16,305    | 8,153   | 5,867          |
| <b>Stable Growth Period</b>    |        |                     |           |         |                |
| Reinvestment Rate              | 33.33% | 2007                | 17,175    | 11,450  |                |
| Tax Rate                       | 35.00% |                     |           |         |                |
| Growth                         | 5.33%  | Terminal price      |           | 353,265 | 234,132        |
| Cost of capital                | 8.57%  |                     |           |         |                |
| Value of Operating Assets      |        |                     |           |         | 254,543        |
| + Cash & Marketable Securities |        |                     |           |         | \$7,478        |
| - Debt                         |        |                     |           |         | (\$407)        |
| Diluted Shares                 | 4,746  | Total Current Value |           |         | 261,614        |
| <b>Value per share</b>         |        |                     |           |         | <b>\$55.13</b> |

## Calculated Ratios

The inputs to the discounted cash flow model can also be used to calculate expected price/earnings, price/sales, and price/book value ratios. The table below shows the results of those calculations and shows the calculated price using the most recent twelve month values as announced 11/21/02. It should be noted that the price/earnings and price/sale calculations are so close because Raven's net margin over this period nearly equals the average calculated for the earnings model.

|                                | High-growth<br>Period |             | Stable -<br>growth<br>Period |                             |
|--------------------------------|-----------------------|-------------|------------------------------|-----------------------------|
| <b>Length</b>                  | 4                     |             |                              |                             |
| <b>Riskless rate</b>           | 5.0%                  |             | 5.0%                         |                             |
| <b>Market risk premium</b>     | 5.5%                  |             | 5.5%                         |                             |
| <b>Company debt spread</b>     | 0.75%                 |             | 0.75%                        |                             |
| <b>Beta</b>                    | 0.65                  |             | 0.65                         |                             |
| <b>Expected growth rate</b>    | 8.00%                 |             | 5.33%                        |                             |
| <b>Tax rate</b>                | 35.00%                |             | 35.00%                       |                             |
| <b>ROE</b>                     | 16%                   |             | 16%                          |                             |
| <b>Net Margin (from model)</b> | 9.4%                  |             | 9.4%                         |                             |
| <b>Cost of capital</b>         | 8.57%                 |             | 8.57%                        |                             |
| <b>Payout ratio</b>            | 50.00%                |             | 66.67%                       |                             |
| <b>Trailing 12 Months</b>      |                       |             |                              |                             |
| <b>Net Income</b>              | 11,073                |             |                              |                             |
| <b>Book Value</b>              | 57,101                |             |                              |                             |
| <b>Revenue</b>                 | 112,698               |             |                              |                             |
| <b>Diluted Shares</b>          | 4,701                 |             |                              |                             |
|                                |                       |             | <b>Calculated<br/>ratios</b> | <b>Calculated<br/>Price</b> |
| <b>Earnings per share)</b>     | \$2.36                | <b>P/E</b>  | 23.18                        | <b>\$54.61</b>              |
| <b>Book value per share</b>    | \$12.15               | <b>P/BV</b> | 3.71                         | <b>\$45.06</b>              |
| <b>Sales per share</b>         | \$23.97               | <b>P/S</b>  | 2.18                         | <b>\$52.20</b>              |

## Segment Comparisons

Raven Industries is included in the Electronic Instruments and Controls Industry. This accurately categorized its Electronic Systems and Flow Control Divisions. However, Raven only derives half of its revenue from these divisions. The other half of Raven's revenue comes from its Engineered Films Division and Aerostar Subsidiary. For this portion of its business Raven most closely compares to the Fabricated Plastic and Rubber Industry. In comparing Raven to these two industry groups the data within these groups was filtered. Only small cap firms with market capitalizations between \$20MM and \$250MM were used so that similar size firms were considered. In addition, only firms with earnings and positive equity were considered since Raven is an old, well established company with consistent earnings. Raven Industries was removed from the sample so it would not bias the sample. In comparing Raven Industries to its peer group great care must be used when looking at data from various web sites. The data below was taken from Charles Schwab & Co. where Raven was included in Electronic Controls and Instrumentation. This classification is valid for only about half of Raven's revenue. The Morningstar web site places the company in the Plastics Industry. The MSN and Quicken web sites place it in the Printed Circuit Board Industry.

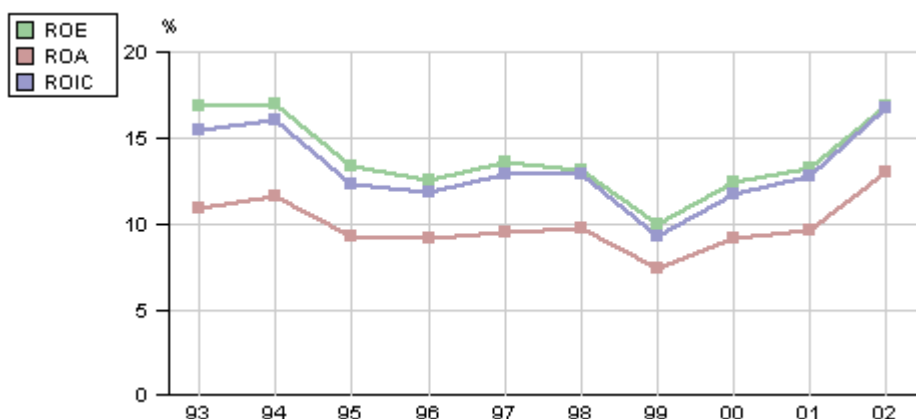
Raven's P/E ratio is very close to its older Engineered Film and Aerostar businesses even though it is rapidly changing to derive a major portion of its income from electrical manufacturing services. Its ROE is significantly above either of its peer groups while its price/sales ratio is in line. Its debt is also much lower, and its 5 year earnings growth is far above the other companies its size.

|                        | Raven  | Electronic Controls & Instrumentation | Fabricated Plastic & Rubber |
|------------------------|--------|---------------------------------------|-----------------------------|
| Market Capitalization  | 150.88 | 118.89                                | 73.64                       |
| Price/Earnings         | 14.00  | 30.25                                 | 12.50                       |
| Profit Margin          | 9.03   | 4.20                                  | 7.06                        |
| Price/Sales (TTM)      | 1.26   | 1.13                                  | 0.90                        |
| Return on Equity (TTM) | 20.78  | 8.55                                  | 10.16                       |
| Sales/Share (TTM)      | 26.09  | 16.63                                 | 36.99                       |
| Debt/Equity            | 0.02   | 0.58                                  | 1.01                        |
| EPS Growth (5 year)    | 15.99  | 3.45                                  | -4.92                       |

Source: Charles Schwab & Co.

### Management Performance

Historical ROE, ROA, and ROIC



|      | 93   | 94   | 95   | 96   | 97   | 98   | 99   | 00   | 01   | 02   |
|------|------|------|------|------|------|------|------|------|------|------|
| ROE  | 16.9 | 17.0 | 13.4 | 12.6 | 13.6 | 13.1 | 10.0 | 12.5 | 13.3 | 16.9 |
| ROA  | 10.9 | 11.6 | 9.3  | 9.2  | 9.5  | 9.8  | 7.4  | 9.2  | 9.7  | 13.0 |
| ROIC | 15.5 | 16.1 | 12.3 | 11.9 | 12.9 | 12.9 | 9.3  | 11.8 | 12.8 | 16.8 |

Source: Quicken.com

From the chart above it can be seen that Raven's management has improved performance of the past several years after a decline for many years. The level of these performance measures compares very well with the overall market and Raven's peer industry groups.

## Dupont Analysis

|                         | Ratio                    | 1997  | 1998  | 1999 | 2000  | 2001  | 2002  |
|-------------------------|--------------------------|-------|-------|------|-------|-------|-------|
| <b>Tax Burden</b>       | Net income/Pretax Income | 0.65  | 0.64  | 0.64 | 0.64  | 0.59  | 0.65  |
| <b>Interest Burden</b>  | Pretax Income/ EBIT      | 0.97  | 0.97  | 0.95 | 0.96  | 0.98  | 0.99  |
| <b>Operating Margin</b> | EBIT/Sales               | 0.09  | 0.08  | 0.07 | 0.07  | 0.08  | 0.12  |
| <b>Asset Turnover</b>   | Sales/Assets             | 1.75  | 1.84  | 1.85 | 2.03  | 2.02  | 1.75  |
| <b>Leverage</b>         | Assets/Equity            | 1.42  | 1.34  | 1.34 | 1.36  | 1.37  | 1.30  |
|                         | ROE                      | 13.6% | 13.1% | 9.9% | 12.4% | 13.4% | 17.0% |

As can be seen in the table above the ROE has increased steadily since 1999. The tax burden has remained nearly constant due to a steady 35% tax rate. Likewise the interest burden is negligible due to low or nonexistent debt. Since 1999 Raven management has been able to steadily improve operating margin through increased efficiency. This has been the result of restructuring and disposal of non-performing assets. Asset turnover improved for a couple of years, but unfortunately dropped back to historical levels last year. Leverage has increased because of new capital investments and stock buybacks.

## Operating Analysis

| Operating Ratios                       | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|--|------|------|------|------|------|------|
| <b>Inventory Turnover</b>              | 4.6  | 4.9  | 5.0  | 5.2  | 5.9  | 5.0  |
| <b>Accounts Receivable Turnover</b>    | 5.5  | 5.6  | 5.7  | 6.6  | 6.9  | 7.2  |
| <b>Accounts Payable Turnover</b>       | 14.8 | 17.0 | 21.8 | 23.7 | 32.0 | 19.7 |
| <b>Days Inventory Held</b>             | 79   | 74   | 73   | 71   | 62   | 74   |
| <b>Days Receivable</b>                 | 66   | 65   | 64   | 55   | 53   | 51   |
| <b>Days Accounts Payable</b>           | 25   | 21   | 17   | 15   | 11   | 19   |
| <b>Required Financing Period</b>       | 120  | 117  | 120  | 111  | 104  | 106  |
| <b>Revenue per Employee (000's)</b>    | 102  | 101  | 107  | 114  | 127  | 141  |
| <b>Net Income per Employee (000's)</b> | 6    | 5    | 4    | 5    | 6    | 11   |

Source: Raven Industries Annual Reports and SEC Edgar Filings

As noted above operating margins have improved since 1999. As can be seen above there has been a dramatic improvement in both revenue and income per person. In addition, there has been steady long-term improvement in accounts receivable turnover. In the past year there was a significant drop in accounts payable turnover. Management can use this technique to improve cash flow on a temporary basis, but it is cause for concern if it persists.

## Liquidity Analysis

| Liquidity Ratios     | 1997   | 1998   | 1999   | 2000   | 2001   | 2002   |
|----------------------|--------|--------|--------|--------|--------|--------|
| <b>Current Ratio</b> | 2.83   | 2.98   | 3.62   | 3.77   | 3.72   | 3.28   |
| <b>Quick Ratio</b>   | 0.17   | 0.15   | 0.32   | 0.39   | 0.77   | 0.54   |
| <b>Debt/Equity</b>   | 0.08   | 0.05   | 0.09   | 0.07   | 0.06   | 0.01   |
| <b>Cash/Share</b>    | \$0.72 | \$0.58 | \$1.12 | \$0.87 | \$2.06 | \$1.58 |

Source: Raven Industries Annual Reports and SEC Edgar Filings

Raven has virtually no debt, and all of its debt related ratios have decreased to nearly zero. It has improved its current and quick ratios, and there is sufficient liquidity to run operations

## **Risk Factors**

|                               |  |
|-------------------------------|--|
| <b>Financial</b>              | Main exposure is to account receivable, but this is not significant. No hedging or off balance sheet strategies are used.  |
| <b>Raw Materials</b>          | Multiple sources are available   |
| <b>Patents</b>                | Company is not dependent on patents. Technological expertise is more important.  |
| <b>Research % Development</b> | Most research is directed toward the Flow Control Division, but it does not consume significant levels of capital.   |
| <b>Environmental</b>          | Raven has liability for clean-up at former Glasstite Subsidiary pick-up truck topper facility.   |
| <b>Competition</b>            | The Aerostar Subsidiary and Engineered Film Division still have a high level of exposure to foreign competition. The Electronic Systems Division is exposed to entry into the business from larger, better funded organizations. |
| <b>Large Customers</b>        | No one customer accounts for a significant amount of Raven's annual revenue. Large long-term contracts exist with Motorola in the Electronic Systems Division and the federal government in the Engineered Films Division.       |
| <b>Litigation</b>             | Management believes that any claims arising from current law suits will be covered by insurance.   |

## **Conclusion**

Raven Industries is an undervalued company. As an established small cap stock it allowed itself to become non-productive in the mid-1990's. New management has revitalized the company and recent performance verifies this. There is now a focus on profitability, and it has succeeded in moving into higher margin business segments. There is a demonstrated commitment to creating shareholder value. Unfortunately, the stock is very thinly traded. All of this means that there is an excellent opportunity for individual small cap investors to purchase a stock with a good probability of reasonable capital gain with little downside risk. In addition, there is a dividend yield available that is higher than any money market yield currently available.

## **Sources Used in Analysis**

BigCharts.com  
Bureau of Economic Analysis  
Charles Schwab & Co.  
Morningstar  
Multex Investor  
Plastics Molding & Fabricating Magazine  
Quicken Brokerage  
Technology Forecaster, Inc.  
U.S. Department of Agriculture