

# Research Report

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**ELECTRONIC INSTRUMENTS  
& CONTROLS**

**NASDAQ: RAVN  
PRICE: \$38.67  
TARGET \$55.00**

## Investor Summary

<b>Stock Data</b>		<b>Sales &amp; Earnings</b>		<b>2004A</b>	<b>2005E</b>	<b>2006E</b>
Price (08/17/2004)	\$38.67	Revenue (MM)	\$143	\$154	\$167	
52-Week Range	\$40.22 - 23.22	EBITDA (MM)	\$26	\$29	\$32	
Dividend Yield	0.9%	EPS (diluted)	\$1.50	\$1.73	\$1.94	
<b>Capitalization</b>		<b>Value Measures</b>				
Shares Outstanding (MM)	9.04	Price/Earnings	25.27	21.92	19.68	
Market Capitalization (MM)	\$349.6	Price/Sales	2.45	2.26	2.09	
Debt/Equity	0.00	Price/Book	4.08			
<b>Projections</b>		<b>Growth (5 Yr.)</b>		<b>Historical</b>	<b>Projected</b>	
12-Month Price Target	\$46.12	Earnings	18.2%	13.0%		
24-Month Price Target	\$55.00	P/E/G	1.39	1.94		
Annual Total Return	20.1%					

### Raven Industries is an attractive buying opportunity for the following reasons:

- Stock is currently 30% under valued
- Manufacturing company with four very different, high margin business activities
- Potential for growth above GDP levels in all business segments
- Effective change in management and strategy
- Recent history of accelerating earnings growth
- Approximate 2% dividend yield with history of increasing dividends

### 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 27%

### Areas for shareholder concern:

- Current success is closely tied to Roger Moquist becoming CEO
- New products in the Flow Controls Division may not be well received
- Electronic Systems Division may have difficulty generating revenue through new contracts

### Expectations

In August of 2000 a new CEO, Roger Moquist, took office and adopted a business strategy of "shrink, fix, grow". So far he and his management team have shown an ability to deliver on that strategy. Non-producing assets were jettisoned, margins were improved, and now the business is growing. Diversification, high revenue growth, and strong margins in all business segments will drive earnings. As earnings continue to grow this company will become more widely held and the share price will rise.

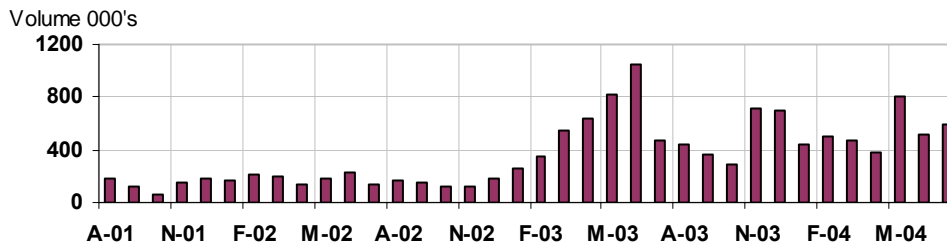
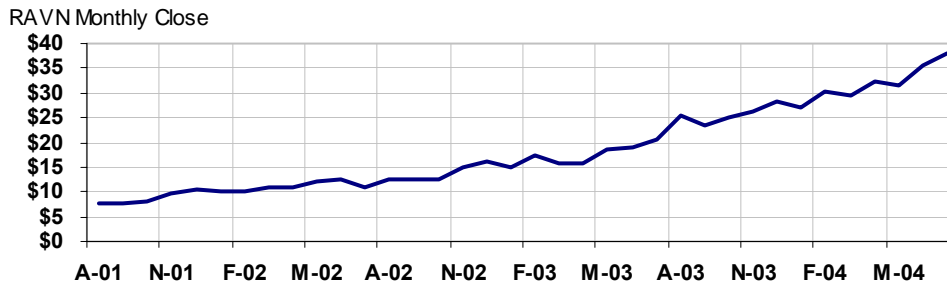
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## Company Overview & History

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 manufacture 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 manufacture 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



## Major Company Divisions

### 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. Based on historical averages, strong market demand, 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 has shown annual growth of over 12% for the past five years in this division. Based on this historical growth and future industry growth projections a growth rate of 12% has been used to project earnings for this division.

### **Flow Controls Division**

The flow control industry consists of smaller 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 may bode for growth in this division as farmers search for ways to be more productive. 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. Raven products are achieving growing acceptance both domestically and abroad in a market with few participants. Over the past five years Raven has achieved over 18% annual growth in this division. Since future growth is dependent on new products a conservative growth rate of 6% has been used to project earnings for this division despite strong early acceptance.

## **Other Organizational Topics**

### **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. This has resulted in a focus on inflatable and other marketing products. This 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**

Several 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. 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 strategy 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. The Beta Raven Industrial Controls Division, which produced and sold computerized process-control systems directly to feedmills and to other markets, was sold in 2003. In 2004 the Aerostar subsidiary sold a sewing plant which had been closed in 2003

## 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

	2004	2003	2002	2001	2000	1999	1 Yr.	5 Yr.
<b>Revenue</b>								
Electronic Systems Division	44,307	38,589	32,289	32,039	30,175	24,958	14.8%	12.2%
Flow Controls Division	35,059	28,496	23,178	16,758	13,520	15,311	23.0%	18.0%
Engineered Films Division	46,408	39,975	40,280	40,004	35,889	32,514	16.1%	7.4%
Aerostar	16,953	12,529	16,271	24,559	28,277	35,625	35.3%	-13.8%
<b>Revenue from Operations</b>	<b>142,727</b>	<b>119,589</b>	<b>112,018</b>	<b>113,360</b>	<b>107,861</b>	<b>108,408</b>	<b>19.3%</b>	<b>5.7%</b>
Divisions Sold or For Sale	-	1,314	6,497	19,498	42,523	46,798	-100.0%	-100.0%
<b>Total Revenues</b>	<b>142,727</b>	<b>120,903</b>	<b>118,515</b>	<b>132,858</b>	<b>150,384</b>	<b>155,206</b>	<b>18.1%</b>	<b>-1.7%</b>
- Cost of goods sold	104,823	89,422	91,519	108,068	121,283	125,632	17.2%	-3.6%
<b>Gross Profit</b>	<b>37,904</b>	<b>31,481</b>	<b>26,996</b>	<b>24,790</b>	<b>29,101</b>	<b>29,574</b>	<b>20.4%</b>	<b>5.1%</b>
<b>Less Operating Expense</b>								
Sales, General, & Admin.	11,960	10,629	11,043	13,883	14,826	15,142	12.5%	-4.6%
Total Depr. & Amort.	4,145	3,966	3,145	3,667	4,884	5,133	4.5%	-4.2%
Unusual Expense (Inc.)	173	(179)	(367)	(3,508)	(1,186)	(374)	-196.6%	N/M
<b>Total Operating Expenses</b>	<b>16,278</b>	<b>14,416</b>	<b>13,821</b>	<b>14,042</b>	<b>18,524</b>	<b>19,901</b>	<b>12.9%</b>	<b>-3.9%</b>
<b>Operating income</b>								
Ongoing Operations	21,981	16,861	13,906	9,907	8,521	8,220	30.4%	21.7%
Divisions Sold or For Sale	(355)	204	(613)	3,331	2,606	1,453	-274.0%	-175.4%
Nonrecurring	-	-	(118)	(2,490)	(550)	-	N/M	N/M
<b>Total Operating Income</b>	<b>21,626</b>	<b>17,065</b>	<b>13,175</b>	<b>10,748</b>	<b>10,577</b>	<b>9,673</b>	<b>26.7%</b>	<b>17.5%</b>
+ Other Income	160	252	519	434	344	450	-36.5%	-18.7%
<b>EBIT</b>	<b>21,786</b>	<b>17,317</b>	<b>13,694</b>	<b>11,182</b>	<b>10,921</b>	<b>10,123</b>	<b>25.8%</b>	<b>16.6%</b>
- Interest Expenses	70	63	129	258	418	474	11.1%	-31.8%
<b>Pretax Income</b>	<b>21,716</b>	<b>17,254</b>	<b>13,565</b>	<b>10,924</b>	<b>10,503</b>	<b>9,649</b>	<b>25.9%</b>	<b>17.6%</b>
- Income Taxes	7,880	6,069	4,718	4,513	3,741	3,467	29.8%	17.8%
<b>Net Income</b>	<b>13,836</b>	<b>11,185</b>	<b>8,847</b>	<b>6,411</b>	<b>6,762</b>	<b>6,182</b>	<b>23.7%</b>	<b>17.5%</b>
Tax Rate	36.3%	35.2%	34.8%	41.3%	35.6%	35.9%	3.2%	0.2%
Dividends Paid	3,075	2,563	2,371	2,399	2,895	2,944	20.0%	0.9%
<b>EBITDA</b>	<b>25,931</b>	<b>21,283</b>	<b>16,839</b>	<b>14,849</b>	<b>15,805</b>	<b>15,256</b>	<b>21.8%</b>	<b>11.2%</b>
Shares outstanding (000's)	9,041	9,151	9,311	10,333	13,115	9,503	-1.2%	-1.0%
Diluted Shares outstanding	9,245	9,348	9,492	10,338	13,116	9,514	-1.1%	-0.6%
<b>Earnings Per Share</b>								
Basic	\$1.53	\$1.22	\$0.95	\$0.62	\$0.52	\$0.65	25.2%	18.7%
Diluted	\$1.50	\$1.20	\$0.93	\$0.62	\$0.52	\$0.65	25.1%	18.2%

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 about \$1,500,000 per year. These costs are included in the cost of goods sold in the year in which they are incurred. These costs which are usually related to the flows control division 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 Model

	2004	2005E	2006E	2007E	2008E	2009E	Forecast & Explanation	
<b>Revenue</b>								
Electronic Systems Division	44,307	49,624	55,579	62,248	69,718	78,084	12.0%	Industry growth resumes
Flow Controls Division	35,059	37,864	40,893	44,164	47,697	51,513	8.0%	Stronger at first
Engineered Films Division	46,408	49,192	52,144	55,273	58,589	62,104	6.0%	Slower than past 5 yrs.
Aerostar	16,953	17,801	18,691	19,625	20,606	21,637	5.0%	New strategy ends slide
<b>Revenue from Operations</b>	<b>142,727</b>	<b>154,481</b>	<b>167,306</b>	<b>181,310</b>	<b>196,611</b>	<b>213,338</b>	<b>8.4%</b>	
Divisions Sold or For Sale	-	-	-	-	-	-		
<b>Total Revenues</b>	<b>142,727</b>	<b>154,481</b>	<b>167,306</b>	<b>181,310</b>	<b>196,611</b>	<b>213,338</b>		
- Cost of goods sold	104,823	113,209	122,266	132,047	142,611	154,019	8.0%	Historically less than sales
<b>Gross Profit</b>	<b>37,904</b>	<b>41,272</b>	<b>45,041</b>	<b>49,263</b>	<b>54,000</b>	<b>59,319</b>		
<b>Less Operating Expense</b>								
Sales, General, & Admin.	11,960	12,678	13,438	14,245	15,099	16,005	6.0%	Slightly less than growth
Total Depr. & Amort.	4,145	4,352	4,570	4,798	5,038	5,290	5.0%	Continuation of past year
Unusual Expense (Income)	173	0	0	0	0	0		No plans announced
<b>Total Operating Expenses</b>	<b>16,278</b>	<b>17,030</b>	<b>18,008</b>	<b>19,043</b>	<b>20,137</b>	<b>21,295</b>		
<b>Operating income</b>								
Ongoing Operations	21,981	24,242	27,033	30,221	33,863	38,024		
Divisions Sold or For Sale	(355)							No plans announced
Nonrecurring	-							Restructuring is over
<b>Total Operating Income</b>	<b>21,626</b>	<b>24,242</b>	<b>27,033</b>	<b>30,221</b>	<b>33,863</b>	<b>38,024</b>		
+ Other Income	160	400	400	400	400	400		Average from last 3 yrs.
<b>EBIT</b>	<b>21,786</b>	<b>24,642</b>	<b>27,433</b>	<b>30,621</b>	<b>34,263</b>	<b>38,424</b>		
- Interest Expenses	70	100	100	100	100	100		Short-term debt only
<b>Pretax Income</b>	<b>21,716</b>	<b>24,542</b>	<b>27,333</b>	<b>30,521</b>	<b>34,163</b>	<b>38,324</b>		
- Income Taxes	7,880	8,590	9,566	10,682	11,957	13,413		
<b>Net Income</b>	<b>13,836</b>	<b>15,952</b>	<b>17,766</b>	<b>19,838</b>	<b>22,206</b>	<b>24,910</b>		
Tax Rate	36.3%	35.0%	35%	35%	35%	35%		Historical is near 35%
Dividends Paid	3,075	3,106	3,137	3,168	3,200	3,232	1.0%	Historical average
<b>EBITDA</b>	<b>25,931</b>	<b>28,994</b>	<b>32,002</b>	<b>35,419</b>	<b>39,301</b>	<b>43,714</b>		
Shares outstanding (000's)	9,041	8,996	8,951	8,906	8,861	8,817	-0.5%	Buybacks exceed options
Diluted Shares outstanding	9,245	9,199	9,153	9,107	9,061	9,016	-0.5%	Buybacks exceed options
<b>Earnings Per Share</b>								
Basic	\$1.53	\$1.77	\$1.98	\$2.23	\$2.51	\$2.83	<b>13.0%</b>	<b>5 Year Growth Rate</b>
Diluted	\$1.50	\$1.73	\$1.94	\$2.18	\$2.45	\$2.76	<b>13.0%</b>	<b>5 Year Growth Rate</b>

Source: estimates

## Earnings Forecast

As explained earlier 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 8% value used is slightly below the weighted average for revenue growth of 8.4% which is close to the historical difference. Selling, general, and administrative expenses are expected to be less than overall growth after recent cutbacks. The company has paid off 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.

## Common Size Income Statement

	1999	2000	2001	2002	2003	2004	2005E	2006E	2007E	2008E	2009E
<b>Revenue</b>											
Electronic Systems Division	16%	19%	21%	27%	32%	31%	32%	33%	34%	35%	37%
Flow Controls Division	10%	9%	11%	20%	24%	25%	25%	24%	24%	24%	24%
Engineered Films Division	21%	23%	27%	34%	33%	33%	32%	31%	30%	30%	29%
Aerostar	23%	18%	16%	14%	10%	12%	12%	11%	11%	10%	10%
<b>Revenue from Operations</b>	<b>70%</b>	<b>69%</b>	<b>75%</b>	<b>95%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Divisions Sold or For Sale	30%	27%	13%	5%	1%	0%	0%	0%	0%	0%	0%
<b>Total Revenues</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
- Cost of goods sold	81%	78%	72%	77%	74%	73%	73%	73%	73%	73%	72%
<b>Gross Profit</b>	<b>19%</b>	<b>19%</b>	<b>16%</b>	<b>23%</b>	<b>26%</b>	<b>27%</b>	<b>27%</b>	<b>27%</b>	<b>27%</b>	<b>27%</b>	<b>28%</b>
<b>Less Operating Expense</b>											
Sales, General, & Admin.	10%	10%	9%	9%	9%	8%	8%	8%	8%	8%	8%
Total Depreciation & Amort.	3%	3%	2%	3%	3%	3%	3%	3%	3%	3%	2%
Unusual Expense (Income)	0%	-1%	-2%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total Operating Expenses</b>	<b>13%</b>	<b>12%</b>	<b>9%</b>	<b>12%</b>	<b>12%</b>	<b>11%</b>	<b>11%</b>	<b>11%</b>	<b>11%</b>	<b>10%</b>	<b>10%</b>
<b>Operating income</b>											
Ongoing Operations	5%	5%	7%	12%	14%	15%	16%	16%	17%	17%	18%
Divisions Sold or For Sale	1%	2%	2%	-1%	0%	0%	0%	0%	0%	0%	0%
Nonrecurring	0%	0%	-2%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total Operating Income</b>	<b>6%</b>	<b>7%</b>	<b>7%</b>	<b>11%</b>	<b>14%</b>	<b>15%</b>	<b>16%</b>	<b>16%</b>	<b>17%</b>	<b>17%</b>	<b>18%</b>
+ Other Income	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>EBIT</b>	<b>7%</b>	<b>7%</b>	<b>7%</b>	<b>12%</b>	<b>14%</b>	<b>15%</b>	<b>16%</b>	<b>16%</b>	<b>17%</b>	<b>17%</b>	<b>18%</b>
- Interest Expenses	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Pretax Income</b>	<b>6%</b>	<b>7%</b>	<b>7%</b>	<b>11%</b>	<b>14%</b>	<b>15%</b>	<b>16%</b>	<b>16%</b>	<b>17%</b>	<b>17%</b>	<b>18%</b>
- Income Taxes	2%	2%	3%	4%	5%	6%	6%	6%	6%	6%	6%
<b>Net Income</b>	<b>4%</b>	<b>4%</b>	<b>4%</b>	<b>7%</b>	<b>9%</b>	<b>10%</b>	<b>10%</b>	<b>11%</b>	<b>11%</b>	<b>11%</b>	<b>12%</b>
Tax Rate											
Dividends Paid	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
<b>EBITDA</b>	<b>10%</b>	<b>10%</b>	<b>10%</b>	<b>14%</b>	<b>18%</b>	<b>18%</b>	<b>19%</b>	<b>19%</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>

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 100% in the past five 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 will grow at a slower pace will be less than those of from the Electronic Systems Division over the next four years. Contributions from the Flow Control Division will remain relatively unless new products perform much better than expected. 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

	2004	2003	2002	2001	2000	1999
<b>Current Assets</b>						
Cash & Equivalents	14,442	5,217	7,478	10,673	5,707	5,335
Short-term Investments	4,000	4,000	0	0	0	0
Accounts Receivables	18,454	16,468	16,427	19,274	22,717	27,399
Inventories	16,763	21,366	19,082	18,983	24,462	25,978
Deferred Income Taxes	1,313	1,493	1,927	2,516	1,919	1,732
Other Current Assets	738	807	394	371	566	417
<b>Total Current Assets</b>	<b>55,710</b>	<b>49,351</b>	<b>45,308</b>	<b>51,817</b>	<b>55,371</b>	<b>60,861</b>
Fixed Assets	15,950	16,455	14,059	11,647	15,068	19,563
Goodwill & Intangibles	6,776	5,933	7,354	705	2,749	3,097
Other Assets	1,072	1,077	1,115	1,487	859	153
<b>Total Assets</b>	<b>79,508</b>	<b>72,816</b>	<b>67,836</b>	<b>65,656</b>	<b>74,047</b>	<b>83,674</b>
<b>Current Liabilities</b>						
Short & Current LT Debt	72	119	127	1,012	1,044	1,060
Accounts Payable	3,666	5,291	4,801	3,490	5,320	5,993
Accrued Liabilities	7,784	7,157	8,179	8,727	7,721	9,245
Other Current Liabilities	373	600	703	706	617	494
<b>Total Current Liabilities</b>	<b>11,895</b>	<b>13,167</b>	<b>13,810</b>	<b>13,935</b>	<b>14,702</b>	<b>16,792</b>
Other Long Term Liabilities	1,085	1,262	1,714	1,719	1,802	17
Long-term Debt	57	151	280	2,013	3,024	4,572
<b>Total Liabilities</b>	<b>13,037</b>	<b>14,580</b>	<b>15,804</b>	<b>17,667</b>	<b>19,528</b>	<b>21,381</b>
<b>Total Shareholder's Equity</b>	<b>66,471</b>	<b>58,236</b>	<b>52,032</b>	<b>47,989</b>	<b>54,519</b>	<b>62,293</b>
<b>Total Liabilities &amp; Equity</b>	<b>79,508</b>	<b>72,816</b>	<b>67,836</b>	<b>65,656</b>	<b>74,047</b>	<b>83,674</b>

Source: Raven Industries Annual Reports and SEC Edgar Filings

Positive developments on the balance sheet are a decrease in account receivable, inventory, and debt levels. 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.

## Common Size Balance Sheet

	2004	2003	2002	2001	2000	1999
<b>Current Assets</b>						
Cash & Equivalents	18%	7%	11%	16%	8%	6%
Short-term Investments	5%	5%	0%	0%	0%	0%
Accounts Receivables	23%	23%	24%	29%	31%	33%
Inventories	21%	29%	28%	29%	33%	31%
Deferred Income Taxes	2%	2%	3%	4%	3%	2%
Other Current Assets	1%	1%	1%	1%	1%	0%
<b>Total Current Assets</b>	<b>70%</b>	<b>68%</b>	<b>67%</b>	<b>79%</b>	<b>75%</b>	<b>73%</b>
Fixed Assets	20%	23%	21%	18%	20%	23%
Goodwill & Intangibles	9%	8%	11%	1%	4%	4%
Other Assets	1%	1%	2%	2%	1%	0%
<b>Total Assets</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Current Liabilities</b>						
Short & Current LT Debt	0%	0%	0%	2%	1%	1%
Accounts Payable	5%	7%	7%	5%	7%	7%
Accrued Liabilities	10%	10%	12%	13%	10%	11%
Other Current Liabilities	0%	1%	1%	1%	1%	1%
<b>Total Current Liabilities</b>	<b>15%</b>	<b>18%</b>	<b>20%</b>	<b>21%</b>	<b>20%</b>	<b>20%</b>
Other Long Term Liabilities	1%	2%	3%	3%	2%	0%
Long-term Debt	0%	0%	0%	3%	4%	5%
<b>Total Liabilities</b>	<b>16%</b>	<b>20%</b>	<b>23%</b>	<b>27%</b>	<b>26%</b>	<b>26%</b>
<b>Total Shareholder's Equity</b>	<b>84%</b>	<b>80%</b>	<b>77%</b>	<b>73%</b>	<b>74%</b>	<b>74%</b>
<b>Total Liabilities &amp; Equity</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: Raven Industries Annual Reports and SEC Edgar Filings

## Statement of Cash Flows

	2004	2003	2002	2001	2000	1999
<b>Cash Flows - Operating</b>						
Net Income	13,836	11,185	8,847	6,411	6,762	6,182
Depreciation	4,145	3,966	3,145	3,667	4,884	5,133
Deferred Taxes	254	1,157	586	-684	-1,019	-553
Changes in Working Capital	850	-3,470	5,453	2,914	478	-2,299
Other Operating Activities	647	-103	465	-2,867	-730	-137
<b>Net Cash from Operations</b>	<b>19,732</b>	<b>12,735</b>	<b>18,496</b>	<b>9,441</b>	<b>10,375</b>	<b>8,326</b>
<b>Cash Flows - Investing</b>						
Capital Expenditures	-3,330	-6,033	-5,094	-3,090	-3,639	-4,606
Other Investing Activities	-1,022	-3,133	-8,058	12,842	9,962	1,479
<b>Net Cash From Investing</b>	<b>-4,352</b>	<b>-9,166</b>	<b>-13,152</b>	<b>9,752</b>	<b>6,323</b>	<b>-3,127</b>
<b>Cash Flows - Financing</b>						
Dividends Paid	-3,075	-2,563	-2,371	-2,399	-2,895	-2,944
Long-Term Debt Net	-141	-131	-3,012	-1,043	-1,564	2,738
Common Shares Purchased	-3,068	-3,324	-2,848	-10,829	-11,881	-2,608
Common Shares Issued	0	0	0	0	0	0
Proceeds from stock options	129	188	284	44	14	100
Other Financing Activities	0	0	-592	0	0	0
<b>Net Cash from Financing</b>	<b>-6,155</b>	<b>-5,830</b>	<b>-8,539</b>	<b>-14,227</b>	<b>-16,326</b>	<b>-2,714</b>
<b>Net Change in Cash</b>	<b>9,225</b>	<b>-2,261</b>	<b>-3,195</b>	<b>4,966</b>	<b>372</b>	<b>2,485</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 along with a one-time special dividend. Capital expenditures have stayed fairly steady with a big step up in 2003 and 2004.

## Target Price Calculation

The value of Raven Industries is analyzed below using three techniques: calculated ratios, discounted cash flow (DCF) model, and free cash flow to firm (FCFF) model. Based on the results shown below a target price of \$55.00 has been assigned. Raven has shown a significant change in its operating results, but it is believed that it may take up to two years for the market to adjust from the recent close of \$38.67. This would equate to a 19.2% annual increase in share price in addition to the current dividend yield of 0.9%. Raven has increased its dividend in each of the past ten years and paid a one-time \$1.25 per share this past year. The inputs to the discounted cash flow model were used to calculate the price/earnings, price/sales, and price/book value ratios shown below. The details of the DCF and DD models are shown on the following pages.

### Calculated Ratios

Model Assumptions	High-growth Period	Stable - growth Period	Actual	2004 Diluted
	Length (Years)	5		Earnings per share
Riskless rate	4.3%	4.3%	Book value per share	\$7.19
Market risk premium	5.5%	5.5%	Sales per share	\$15.44
Company debt spread	0.75%	0.75%		
Beta	0.63	0.63		
Expected growth rate	13.00%	5.33%		
Tax rate	35.00%	35.00%		
ROE	20%	16%		
Net Margin	10.8%	10.8%		
Cost of capital	7.69%	7.69%		
Payout ratio	35.00%	66.67%		

Calculated	Ratio	Price
P/E	39.94	<b>\$59.78</b>
P/BV	7.99	<b>\$57.44</b>
P/S	4.31	<b>\$66.57</b>
<b>DCF Model</b>		<b>\$55.86</b>
<b>FCFF Model</b>		<b>\$51.04</b>

## 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 valuing 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 could cause the firm to return to a stable growth phase. Therefore a two stage model will be used to value the firm.

### 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	35.0%	2005	\$1.73	\$0.61	\$0.56
ROE	20.0%	2006	\$1.94	\$0.68	\$0.59
Growth	13.0%	2007	\$2.18	\$0.76	\$0.61
Cost of capital	7.69%	2008	\$2.45	\$0.86	\$0.64
		2009	\$2.76	\$0.97	\$0.67
<b>Stable Growth Period</b>					
Payout Ratio	66.7%	2009	\$2.91	\$1.94	
ROE	16.0%				
Growth	5.3%		Terminal price	\$82.35	\$52.80
Cost of capital	7.69%				
			<b>Value per Share</b>		<b>\$55.86</b>

## Free Cash Flow to Firm

Another way to calculate firm value is to discount cash flows to 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	65.00%	2005	16,017	5,606	5,206
Tax Rate	35.00%	2006	17,831	6,241	5,381
Growth	13.00%	2007	19,903	6,966	5,578
Cost of capital	7.69%	2008	22,271	7,795	5,796
		2009	24,975	8,741	6,036
<b>Stable Growth Period</b>					
Reinvestment Rate	33.33%	2007	23,459	15,639	
Tax Rate	35.00%				
Growth	5.33%		Terminal value	663,779	425,584
Cost of capital	7.69%				
			Value of Operating Assets		453,581
			+ Cash & Marketable Securities		\$18,442
			- Debt		(\$129)
<b>Diluted Shares</b>	9,245		Total Current Value		471,894
			<b>Value per Share</b>		<b>\$51.04</b>

## Ratio Analysis

Because of the diverse nature of the divisions in Raven Industries it is compared to both the Electronic Instruments and Controls Industry and Fabricated Plastic and Rubber Industry below.

### Valuation Ratios

	1999	2000	2001	2002	2003	2004		Electronic Instruments & Controls		Fabricated Plastic & Rubber	
<b>Valuation Ratios</b>											
P/E Ratio	4.76	5.45	8.61	11.58	13.21	19.58	▲	22.69	▼	19.93	▼
Price to Sales	0.19	0.25	0.42	0.86	1.22	1.90	▲	1.65	▲	1.32	▲
Price to Book	0.47	0.68	1.15	1.97	2.54	4.08	▲	2.69	▲	2.31	▲
Price to Tangible Book	0.50	0.71	1.17	2.29	2.83	4.54	▲	5.05	▼	6.08	▼
Price to Cash Flow	2.60	3.16	5.48	8.54	9.75	15.07	▲	18.39	▼	11.00	▲
Price to Free Cash Flow	16.05	2.47	4.31	7.43	18.13	39.84	▲	33.32	▲	28.68	▲

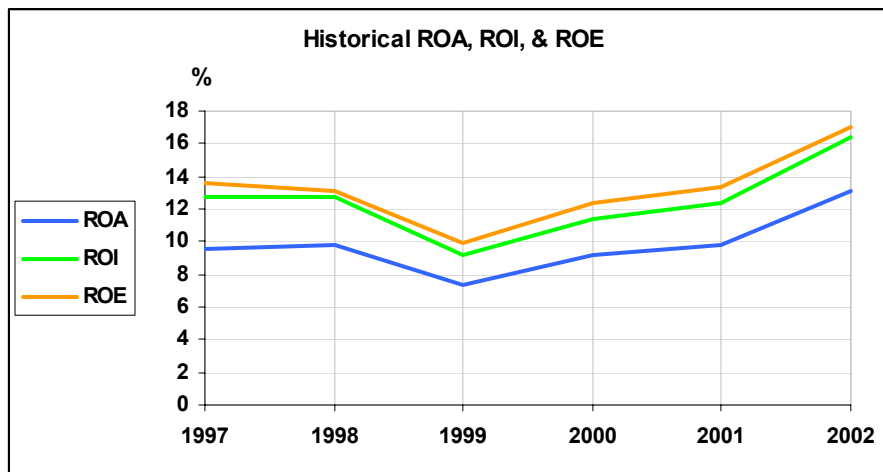
Source: Company data is from Raven Industries Annual Reports and SEC Edgar Filings , and industry data is from Reuters  
Arrow direction indicates how current year relates to prior year or industry sector. Green arrows indicate a positive condition.

### Management Performance

Efficiency ratios have improved since 1999. As can be seen below there has been a dramatic improvement in both revenue and income per employee. In addition, there has been a four-year improvement in accounts receivable turnover. From the chart below it can be seen that Raven's management has improved performance over 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. .

	1999	2000	2001	2002	2003	2004		Electronic Instruments & Controls		Fabricated Plastic & Rubber	
<b>Management Effectiveness</b>											
Return on Assets	7.39	9.13	9.76	13.04	15.36	17.40	▲	1.53	▲	5.69	▲
Return on Investment	9.24	11.39	12.40	16.38	18.75	20.46	▲	1.65	▲	6.02	▲
Return on Equity	9.92	12.40	13.36	17.00	19.21	20.82	▲	3.34	▲	12.76	▲
<b>Efficiency Ratios</b>											
Revenue/Employee (\$000)	107.41	113.93	127.38	141.43	158.04	178.41	▲	246.67	▼	264.49	▼
Net Income/Employee (\$000)	4.28	5.12	6.15	10.56	14.62	17.30	▲	13.05	▲	13.92	▲
Receivable Turnover	5.71	6.00	6.33	6.64	7.35	8.17	▲	6.63	▲	8.06	▲
Inventory Turnover	4.85	4.81	4.97	4.81	4.42	5.50	▲	5.56	▼	7.58	▼
Asset Turnover	1.87	1.91	1.90	1.78	1.72	1.87	▲	1.19	▲	1.29	▲

Source: Company data is from Raven Industries Annual Reports and SEC Edgar Filings , and industry data is from Reuters  
Arrow Direction indicates how current year relates to prior year or industry sector. Green arrows indicate a positive condition.



## Dupont Analysis of ROE

As can be seen in the table below the ROE has increase 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.

	Ratio	1997	1998	1999	2000	2001	2002
<b>Tax Burden</b>	Net income/Pretax Income	0.645	0.643	0.641	0.644	0.587	0.652
<b>Interest Burden</b>	x (Pretax Income/ EBIT)	0.975	0.975	0.953	0.962	0.977	0.991
<b>Operating Margin</b>	x (EBIT/Sales)	0.086	0.085	0.065	0.073	0.084	0.116
<b>Asset Turnover</b>	x (Sales/Assets)	1.754	1.842	1.855	2.031	2.024	1.747
<b>Leverage</b>	x (Assets/Equity)	1.422	1.342	1.343	1.358	1.368	1.304
	<b>= ROE</b>	<b>13.6%</b>	<b>13.1%</b>	<b>9.9%</b>	<b>12.4%</b>	<b>13.4%</b>	<b>17.0%</b>

## Financial Condition

Raven has virtually no debt 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

	1999	2000	2001	2002	2003	2004		Electronic Controls & Fabrication		Fabricated Plastics & Rubber
<b>Financial Condition</b>										
Quick Ratio	2.08	2.10	2.36	1.90	2.13	3.27	▲	1.80	▲	1.15
Current Ratio	3.62	3.77	3.72	3.28	3.75	4.68	▲	2.73	▲	2.00
LT Debt Equity	0.07	0.06	0.04	0.01	0.00	0.00	▼	0.40	▼	0.53
Total Debt to Equity	0.09	0.07	0.06	0.01	0.00	0.00	▼	0.24	▼	0.59
Interest Coverage	21.36	26.13	43.34	106.16	274.87	311.23	▲	5.81	▲	8.16

Source: Company data is from Raven Industries Annual Reports and SEC Edgar Filings , and industry data is from Reuters  
Arrow Direction indicates how current year relates to prior year or industry sector. Green arrows indicate a positive condition.

## Profits and Dividends

Raven's strong profitability ratios are an indicator of its success in executing its strategic plan. While per share dividends have increased consistently, the amount of cash used to pay dividends has remained nearly constant due to share buybacks. The payout ratio has declined for the last for years indicating that Raven should be able to continue to increase dividends without hampering future growth.

	1999	2000	2001	2002	2003	2004		Controls & Fabrication		Plastics & Rubber
<b>Profitability Ratios</b>										
Gross Profit Margin	19.05	19.35	18.66	22.78	26.04	26.56	▲	28.29	▼	21.65
EBITD Margin	9.83	10.51	11.18	14.21	17.60	18.17	▲	9.43	▲	11.25
Operating Margin	6.52	7.26	8.42	11.55	14.32	15.26	▲	5.87	▲	8.23
Pre-Tax Margin	6.22	6.98	8.22	11.45	14.27	15.22	▲	5.71	▲	7.43
Net Profit Margin	3.98	4.50	4.83	7.46	9.25	9.69	▲	1.42	▲	4.68
<b>Dividend Ratios</b>										
Dividend Yield	10.01	7.85	4.35	2.32	1.73	1.13	▼	1.74	▼	1.77
Payout Ratio	0.48	0.43	0.37	0.27	0.23	0.22	▼	0.14	▲	0.27

Source: Company data is from Raven Industries Annual Reports and SEC Edgar Filings , and industry data is from Reuters  
Arrow Direction indicates how current year relates to prior year or industry sector. Green arrows indicate a positive condition.

## Risk Factors

	Score	Comment
<b>Products</b>		
Diversity	0	Strong diversity in product lines
Patents & Copyrights	1	Small exposure related to GPS flow control systems
Pricing	0	All divisions in high margin market segments
Obsolescence	0	No immediate threats to products
Suppliers	0	Not reliant on any one supplier
Commodity prices	2	Engineered Films Division reliant on oil prices
<b>Markets</b>		
Growth	0	Above GDP growth forecast for all segments
Competitors	3	Strong competition in Electronic Systems
Barriers to Entry	7	Low barriers to entry for most product lines
Large customers	3	Motorola 11% of Electronics Systems
<b>Management</b>		
Transparency	0	Excellent breakdown of product line data
Chairman/CEO	5	Separate positions but turnaround is tied to Ronald Moquist
Options	0	2.26% dilution is not excessive
Directors	0	Majority independent
Compensation	0	Ronald Moquist \$481,000 salary plus \$473,000 option
<b>Organization</b>		
Mergers & Acquisitions	0	No recent activity
Reorganizations	0	Results of prior reorganization is having positive effect
Pension	0	None
Employee relations	0	Good
<b>Other</b>		
Litigation	0	No major litigation
Regulatory	0	No regulatory issues
Currency and finance	0	No hedging or off balance sheet activities
Political	0	Little activity in unstable countries
<b>Total Risk Score</b>	<b>21</b>	<b>Pass</b>

This stock is under the risk score threshold of 30. A major risk factor for this stock is low barriers to entry in most product lines. This is partially offset by the fact that Raven specializes in particular segments of the markets that it participates in. The other major risk factor for investors is the degree to which the turnaround in the company appears to be tied to Ronald Moquist taking over as CEO. If he leaves, it will be time for investors to consider selling this stock.

### 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 equivalent to any money market yield currently available.

### Sources Used in Analysis

Bureau of Economic Analysis  
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 Technology Forecaster, Inc.  
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