

## **SUPERIOR INDUSTRIES INTERNATIONAL**

Teresa Blackman, a recent MBA, worked in the Corporate Finance Department of a large commercial bank. She had been in the department only six months and had spent the last month, May 1989, preparing an analysis of a potential acquisition. The report on it would be her first presentation, and she felt herself to be under greater than usual pressure to make sure all the loose ends were tied up. At present, her concerns were in two areas: the interpretation of her results and a technical valuation issue.

### **Background**

Blackman had been assigned the job of finding a suitable acquisition candidate in the original equipment manufacturer (OEM) automobile supplier industry which could help a large diversified company expand into this industry. An important part of her job was to determine whether it was underpriced in the market. Since 1982 the OEM automotive supply industry had been undergoing a consolidation process. A variety of factors such as market base, plant proximity to auto manufacturers, quality ratings, access to Japanese business, technology, and low cost base were essential for success in this highly competitive industry. Low cost production was a necessity since the major auto manufacturers negotiated stringent cost reduction formulas into contracts. As a result, industry margins had been reduced and the weaker players were exiting the market. Only the low-cost producers with the high-quality ratings were able to survive. After an analysis of the OEM automotive supplier industry, Blackman targeted Superior Industries International as an ideal acquisition candidate.

### **Superior Industries**

Superior manufactured cast-aluminum road wheels and automotive accessories (see Exhibit 1). Sales of wheels were to the OEM market and composed 79% of Superior's total sales. Suspension products and miscellaneous accessories for the aftermarket (products sold by retailers to vehicle owners to improve the appearance or performance of a vehicle) were 21% of sales. Although the majority of its manufacturing was done domestically, Superior had facilities in Canada, Mexico, and Puerto Rico.

The market for aluminum wheels had been steadily growing. From 1981 to 1985, the use of aluminum wheels in domestic automobiles had increased from 4 to 12%. During model year 1988, 28.2% of General Motors cars sold and 27.9% of Ford cars were equipped with aluminum wheels, compared with 20.1% and 20.6%, respectively, in model year 1987. Over the next five to seven years, analysts believed the market share could increase to 35%. This growth was in large part attributable to the superior performance characteristics of aluminum wheels as compared with conventional wheels. Aluminum wheels were stronger and 25% lighter than steel wheels (22 lbs vs 29 lbs) which increased fuel efficiency and helped auto makers meet federally mandated Corporate Average Fuel Economy targets. Handling performance of aluminum wheels was also superior, not only because of the lighter weight of aluminum but also because the wheels could be manufactured to more exact specifications than steel wheels. The weight reduction, being in the suspension system, was especially important, since two cars could weigh the same, but the one with the lighter suspension, all other things being equal, would be more fuel efficient. In addition, aluminum wheels came in a wider and more attractive variety of styles. Finally, significant impact on growth had come from dealers, because aluminum wheels were high-margin items and were usually offered as optional features with markups of over 100%.

The huge increase in the market for aluminum wheels was reflected in Superior's stock price as shown in Exhibits 2 and 3. The company had shown dramatic earnings growth during the last six years, which was demonstrated in the strong balance sheet it currently enjoyed (see Exhibits 4 and 5). A favorite of Wall Street, Superior was apparently poised for continuing growth in the next five years.

In the auto-supply industry, orders from the OEM manufacturers depended greatly on the quality ratings a plant received. Superior had the distinction of having been awarded Ford's highest rating, known as "Q-1 Preferred Quality." The firm was one of only two aluminum-wheel manufacturers given this award and was the only one in the continental United States. General Motors had given Superior its "Mark of Excellence" award. Superior's quality and its experience as a low-cost producer made it a very attractive supplier. The company was currently operating at full capacity.

Superior had devised aggressive expansion plans to position itself for the anticipated growth in sales over the next five years. Currently, it had three plants in the United States, two facilities in Canada, and one in Puerto Rico. A fourth U.S. plant was nearing completion and would be operational by the end of 1989. This plant had already been approved for quality by both Ford and GM. A fifth plant, in the design phase, was planned for completion by the end of 1990. These fourth and fifth plants would double production from 3.5 to 7 million wheels per year.

Superior held a 35% share of the aluminum-wheel market. Because the market was fragmented, the company's only significant competitor was Kelsey Hayes, a division of Fruehauf

Corporation. Barriers to entry in the auto-supply industry were high. The cost-reduction-sharing formulas of the large auto manufacturers mandated that one be a low-cost producer. In an ongoing effort to reduce costs, the major auto manufacturers had begun to focus on assembly manufacturing and relied on low-cost suppliers for components. Hence, the more experienced low-cost producers such as Superior had a distinct advantage over newer companies. Furthermore, certification of production facilities generally took between 15-18 months. A trend toward increased outsourcing also benefitted the low-cost producers.

Superior had recently upgraded its computer system to allow for sophisticated design techniques such as three-dimensional modeling. Technological superiority was essential to maintaining a competitive edge and achieving cost reductions. Superior had an active R&D department and was teamed with AMAX, Inc., in developing a proprietary semi-solid metal-forging process that would significantly reduce production time. This was a very promising technology which could radically change the economics of aluminum-wheel production.

Superior's aftermarket sales, which represented 21% of total sales, declined 7.2% in 1988. Intense competition and industry consolidation of the accessories market caused margins to suffer. Sales growth was expected to remain flat, and the company was considering a restructuring of this division.

## **Financial Analysis**

All the information on Superior Industries indicated to Blackman that it had great potential, so she set about the valuation with real optimism. Her basic approach, learned in her MBA program, was to estimate free cash flows and discount them at the weighted average cost of capital (WACC).

## **Cash Flows**

In order to estimate the free cash flow, Blackman used the following assumptions:

1. Sales: Forecasted sales growth would be based on analyst reports. High growth was anticipated through 1991; then growth was expected to taper off.
2. Cost of Goods Sold: COGS was forecasted as a percentage of sales based on the percentage achieved in 1988, 78%. Blackman assumed conservatively that the gross margin would not improve.

3. SG&A: Sales, general, and administrative expenses were forecasted as a percentage of sales based on an historical average of 7.33%.
4. Depreciation: This element was forecasted based on past experience.
5. Provision for Taxes: A tax rate of 34% was assumed.
6. Capital Expenditures: These figures were based on analyst estimates of future capital expenditures.
7. Working Capital: Working capital was forecasted to be approximately 18% of sales. The estimate was based on the forecasted efficiency of the new plants.

The free cash flows that result from these assumptions are shown in Exhibit 6.

## WACC

The estimate of the WACC was based on the following assumptions:

1. Target Capital Structure: Blackman assumed that the capital structure of Superior would not change. At present it was 15% debt to capital (see Exhibit 7).
2. Cost of Debt: After discussions with some investment bankers, Blackman believed that Superior could secure financing using 30-year debentures with a coupon rate of 11%. Based on the best estimates, these bonds would sell at par.
3. Cost of Equity: Based on Superior's capital structure (see Exhibit 7), a beta of 1.07 was estimated. Using this beta estimate, a long-term, risk-free rate of 8.65%, and a market-risk premium of 5.7%, the capital-asset-pricing model yielded an estimate of Superior's cost of equity of 14.75%. The dividend-growth model, assuming a 5% long-term growth rate, yielded an estimate of approximately 12%. Given the relative risks, Blackman decided to give more weight to the CAPM estimate; therefore, she used a 14.75% cost of equity.

Under these assumptions, and assuming a marginal tax rate of 34%, the WACC was estimated to be 13.63%.

**Terminal Value**

A simple constant-growth model was used with a long-run growth rate of 5% assumed.

**Firm Value**

Based on the free cash flows and the WACC (see Exhibit 8), the value of the equity in Superior Industries International was estimated at \$22.78 per share. This figure was less than the latest closing price.

**The Issues**

Blackman was concerned about some of the key elements of her presentation. The first was making sure she could explain her results. The second was getting some idea about how much in the way of synergies would be required in order to generate a value that was consistent with a 20% premium over the current stock price. Blackman believed that her initial approach was quite conservative, that with some synergies, a value of \$30 per share was not unrealistic. The final item was something that was always part of presentations at her firm: a direct valuation of the equity with the focus on the residual cash flows to shareholders (after debt service). She remembered from school that the result would be the same as the free cash flow approach, but she needed to make sure in case this issue was raised during her presentation.

## Exhibit 1

## SUPERIOR INDUSTRIES INTERNATIONAL

## Product Lines

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**Car Lines that Offered Superior Industries' Cast-Aluminum Road Wheels**

GMC S-10 Blazer 4 x 4**	Lincoln Towncar**	Ford Taurus LX**
GMC S-10 Pickup 4 x 4	Lincoln Mark VII	Ford Taurus LX Wagon**
Chevy S-10 Blazer 4 x 4**	Mercury Sable Sedan**	Ford Mustang GT*
Chevy Camaro Sport Coupe*	Mercury Sable Wagon**	Ford Mustang LX**
Chevy Camaro IROC-Z*	Mercury Grand Marquis	Ford LTD Wagon**
Cadillac Eldorado**	Mercury Topaz	Ford LTD Sedan**
Cadillac Seville	Mercury Topaz LTS*	Ford T-Bird Lx**
Cadillac Deville	Mercury Topaz XR5*	Ford Ranger STX 4WD**
Buick Le Sabre	Mercury Cougar LS**	Ford Bronco II 4WD**
Buick Le Sabre Wagon**	Mercury Cougar XR7*	Ford Bronco II XLT**
Buick Electra Wagon**		Ford Tempo
Buick Regal		Ford Tempo 4WD*
Buick Century		
Buick Park Avenue		
Oldsmobile Cutlass Supreme**		
Oldsmobile '98 Touring Sedan		

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**Aftermarket Products**
General Automotive Accessories

Steering-wheel covers  
 Steering wheels  
 Curb feelers  
 Locking gas cap  
 Safety belts  
 License-plate frames  
 Exhaust extensions  
 Custom road wheels  
 Wheel lug nuts  
 Splash guards  
 High-level rear-window brake lights

Truck and Recreational-Vehicle Accessories

Running boards  
 Running-board lights  
 Chrome tailgate protectors  
 External spare-tire carriers  
 External steps  
 Side rails  
 Grab bars and hooks  
 E-Z slider pass-thru windows  
 Towing equipment  
 Tie-downs

Suspension Products

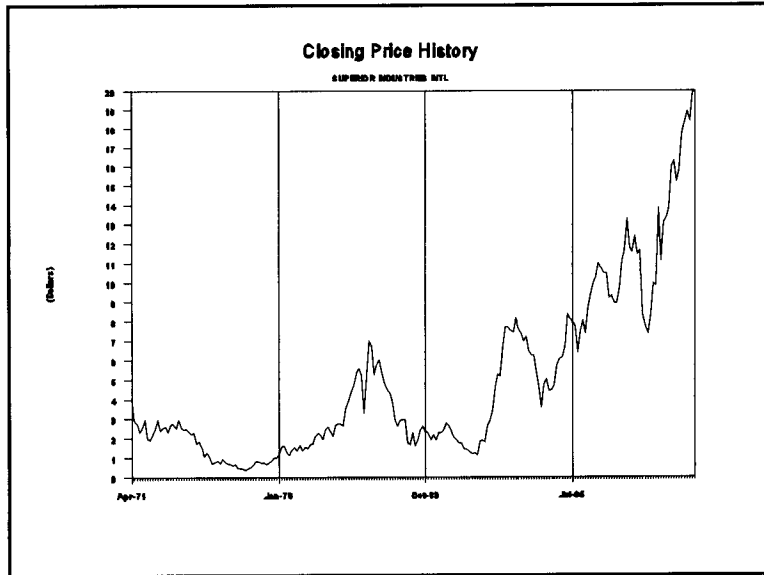
Kits designed to increase vehicles' load capacity and improve handling  
 Lifters  
 Products to rejuvenate worn-out suspension systems

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 \* Indicates standard equipment.

\*\* Indicates high usage of Superior cast-aluminum wheels.

Exhibit 2

SUPERIOR INDUSTRIES INTERNATIONAL



## Exhibit 3

## SUPERIOR INDUSTRIES INTERNATIONAL

## Daily Stock Prices and Other Market Data

## Stock Price

<u>Week Ending</u>	<u>Closing Price</u>
1/03/89	\$20.87
1/10/89	22.00
1/23/89	22.25
1/30/89	22.37
2/08/89	23.00
2/13/89	23.75
2/21/89	22.00
2/27/89	23.25
3/06/89	23.00
3/13/89	22.75
3/20/89	23.50
3/27/89	23.12
4/03/89	23.87
4/10/89	24.00
4/17/89	23.87
4/24/89	23.00
5/01/89	23.12
5/08/89	24.25
5/15/89	25.50
5/22/89	25.12
5/30/89	\$25.25

**Treasury Rates as of 5/31/89**  
 (Source: *Wall Street Journal*)

3 mos.	8.95
1 year	8.98
10 year	8.65
30 year	8.65

## Exhibit 4

## SUPERIOR INDUSTRIES INTERNATIONAL

**Income Statements, 1983-1988**  
(in millions of dollars except per-share data)

	12/83	12/84	12/85	12/86	12/87	12/88
Net sales	85.22	111.62	130.84	148.55	169.50	200.15
Cost of sales	70.91	93.98	106.79	120.92	136.51	159.46
Gross profit	14.31	17.64	24.05	27.63	32.99	41.69
SG&A expenses	6.41	8.10	10.11	10.62	12.30	14.83
Depreciation and amort.	1.76	2.21	2.61	3.44	4.66	5.55
Operating income	6.15	7.33	11.33	13.57	16.03	21.31
Other income (net)	0.91	0.73	0.84	2.66	2.15	2.70
Earnings before int. and taxes	7.06	8.06	12.17	16.23	18.18	24.01
Interest expense	0.80	1.47	1.21	1.81	3.14	3.48
Pretax income	6.26	6.59	10.96	14.43	15.04	20.53
Income taxes	1.97	2.18	3.71	5.92	5.57	7.39
Net inc. before extr. items	4.29	4.42	7.25	8.51	9.48	13.14
Extr. items and discount. ops.	1.12	0.00	0.00	0.00	0.00	0.00
Net income	5.40	4.42	7.25	8.51	9.48	13.14
Common dividends	0.01	0.19	1.19	1.36	1.48	1.67
Earnings per share						
Primary	0.67	0.72	1.20	1.30	1.46	2.07
Fully diluted	0.67	0.72	1.20	1.30	1.46	2.07

## Exhibit 5

## SUPERIOR INDUSTRIES INTERNATIONAL

Balance Sheets, 1983-1988  
(in millions of dollars)

	12/83	12/84	12/85	12/86	12/87	12/88
<b>ASSETS</b>						
Cash and equivalents	4.27	13.56	15.61	38.91	20.90	35.16
Receivables	16.83	22.47	20.83	20.93	29.51	35.33
Inventories	9.86	15.99	17.04	21.51	30.18	35.28
Other current assets	0.96	0.70	0.69	1.46	2.14	4.85
	<u>31.91</u>	<u>52.72</u>	<u>54.17</u>	<u>82.81</u>	<u>82.73</u>	<u>110.62</u>
Total current assets	15.62	17.16	20.59	31.83	40.25	50.43
Net prop., plant, and equip.	1.09	0.68	0.30	0.67	0.68	0.58
Other assets						
	<u>48.62</u>	<u>70.56</u>	<u>75.06</u>	<u>115.31</u>	<u>123.66</u>	<u>161.63</u>
Total Assets						
<b>LIABILITIES AND NET WORTH</b>						
Short-term debt	3.02	10.53	4.85	7.14	0.88	3.15
Accounts payable	7.57	11.38	13.03	17.23	24.27	28.15
Taxes payable	0.32	0.56	0.00	1.35	0.38	1.22
Other current liab.	4.31	5.23	6.17	7.78	9.19	14.93
	<u>15.22</u>	<u>27.70</u>	<u>24.05</u>	<u>33.49</u>	<u>34.72</u>	<u>47.45</u>
Total current liabs.	8.34	9.53	5.88	28.51	27.91	41.59
Long-term debt (LTD)	0.64	4.41	5.14	5.68	7.11	7.69
Deferred taxes and ITC	0.00	0.00	0.00	0.00	0.00	0.50
Other liabilities	0.00	0.00	0.00	0.42	0.30	NA
Minority interest						
	<u>24.19</u>	<u>41.64</u>	<u>35.07</u>	<u>68.09</u>	<u>70.04</u>	<u>97.22</u>
Total liabilities	0.00	0.00	0.00	0.00	0.00	0.00
Preferred stock	24.43	28.92	39.99	47.22	53.62	64.41
Common equity						
	<u>48.62</u>	<u>70.56</u>	<u>75.06</u>	<u>115.31</u>	<u>123.66</u>	<u>161.63</u>
Total liabs. and net worth						



## Exhibit 7

## SUPERIOR INDUSTRIES INTERNATIONAL

## Automotive-Component Manufacturers\*

	<u>Historical</u> <u>BETA</u>	<u>Book</u> <u>Debt/</u> <u>Equity</u>	<u>Market</u> <u>Debt/</u> <u>Equity</u>	<u>Market</u> <u>Debt/</u> <u>Capital</u>
ARVIN INDUSTRIES INC . . . . .	1.16	0.96	50.28 %	33.46 %
BAILEY CORP . . . . .	1.45	1.57	36.53	26.76
CHAMPION PARTS INC . . . . .	1.13	0.98	208.87	67.62
CLARCOR INC . . . . .	1.00	0.45	0.54	0.54
DANA CORP . . . . .	0.85	1.14	119.26	54.39
DURAKON INDS INC . . . . .	0.78	0.92	85.07	45.97
EATON CORP . . . . .	0.93	0.56	35.74	26.33
ECHLIN INC . . . . .	0.99	0.17	13.31	11.75
EXCEL INDUSTRIES INC . . . . .	1.09	1.15	31.97	24.23
FEDERAL-MOGUL CORP . . . . .	1.09	0.34	35.25	26.07
FILTERTEK INC . . . . .	1.17	0.57	18.49	15.61
GENTEX CORP . . . . .	1.63	0.04	0.49	0.49
HASTINGS MFG CO . . . . .	0.68	0.49	121.71	54.90
J P INDUSTRIES INC . . . . .	1.22	2.20	115.03	53.50
LARIZZA INDUSTRIES INC . . . . .	0.65	5.70	28.81	22.37
MAGNA INTERNATIONAL . . . . .	1.43	1.48	229.98	69.69
MASCO INDUSTRIES INC . . . . .	1.24	3.66	128.14	56.17
MODINE MFG CO . . . . .	0.76	0.19	16.15	13.91
MR GASKET CO . . . . .	0.68	2.29	249.89	71.42
SIMPSON INDUSTRIES . . . . .	0.72	0.43	20.42	16.96
SMITH (A.O.) CORP . . . . .	1.00	0.57	89.80	47.31
SPARTON CORP . . . . .	0.86	0.02	24.38	19.60
STANDARD PRODUCTS CO . . . . .	0.80	0.48	8.38	7.73
SUDBURY INC . . . . .	0.94	2.99	280.84	73.74
SUPERIOR INDUSTRIES INTL . . . . .	1.07	0.65	18.10	15.33
TALLEY INDUSTRIES INC . . . . .	1.09	1.91	197.29	66.36
TELEFLEX INC . . . . .	1.25	0.42	18.70	15.75
TRICO PRODUCTS CORP . . . . .	0.70	0.11	51.59	34.03
VOPLEX CORP . . . . .	0.61	0.23	20.72	17.16
WALBRO CORP . . . . .	0.65	1.70	36.30	26.63
Industry Average . . . . .	0.99	1.15	76.40	33.86 %

\* All firms were engaged in automotive-component manufacturing for both the OEM and aftermarket. The companies were similar to Superior in that they all had 3714 listed as their primary SIC code. Source: LOTUS ONESOURCE.

**Exhibit 8****SUPERIOR INDUSTRIES INTERNATIONAL****Estimate of Firm Value**  
(in millions of dollars, except share price)

	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>
Free cash flow	0.4	2.7	18.7	24.6	26.3	27.8	30.6	432.0
Present value @ 13.63%	0.3	2.1	12.8	14.7	13.9	12.9	12.5	155.5

Firm value = \$224.7 million

Total firm value	\$224.7 million
Debt	-44.7
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Equity	\$180.0 million
Share price*	\$22.78

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\* Based on 7.9 million shares outstanding.