FIVE

How're We Doing, Coach? Analyzing What's Right and Wrong with Your Business

There was a young man named West
By comparisons so rudely obsessed
That he, post-coital
Would delightedly chortle,
"Ah, that was good – no, better – the best!

– Anonymous

Everybody compares! Weekend duffers flailing away at golf balls become Nicklaus, Watson, and Lopez-Melton. Hot kids on local courts secretly serve aces past McEnroe or Austin. What struggling business owner up to his ears in bills, hopes, and promises doesn't look with yearning rivalry at the 25% after-tax return on equity earned by some of his or her high-flying competitors? It's the way of the world. Flat-chested preteens stare with wonder and envy at their buxom older sisters, and little boys who sidle up to their first public urinal glance around at the standards in evidence. And everybody knows what wins it all in their game: straight A's in school, a zero handicap on the course, top seed in the tournament, and potfuls of money — so much after taxes that you never have to ask the price of anything unless you want to.

This chapter is about comparisons:

Who

What

Where . . .

who you compare your company with, what criteria you use to compare your company with another, and where you find the information to form the basis for a comparison.

RATIOS — US VS. THEM

Bob Who?

Robert Morris helped finance the colonists through the Revolutionary War, but that's not why he's remembered. Robert Morris Associates is The National Association of

Bank Loan and Credit Officers, representing about 75% of U. S. commercial banking resources. Imagine all those banks and the diverse borrowers like you who arrive daily with financial statements to support their loan applications. Robert Morris collects most of these statements every year, feeds them to a computer, and out comes their series *Annual Statement Studies*, with one page of financial ratios each for hundreds of different industries (321 as of 1981). This financial profile is used by all sorts of people including your banker. Page 97 is the *Annual Statement Studies* for the AM radio station business, S.I.C. # 4832*.

What Does It All Mean, Coach?

A typical page in Robert Morris is divided into two parts. Part one is found *above* the row labeled **RATIOS;** its information is expressed as percentages summarizing assets, liabilities, owners' equity, and items from the income statement. Part two lies *below* the row labeled **RATIOS** and contains sixteen standard financial ratios.

To the left and right of the center column, which names all the classifications, are a number of vertical columns. The column farthest left headed 0-250M reports

16

information for AM radio stations whose total assets are less than $250,000. The number 16 indicates that sixteen such stations reported data. On our sample page, there are two columns reporting other size classifications ($250,000–1,000,000) and ($1,000,000–10,000,000),

All

and a fourth column headed 59, which is the financial composite of all fifty-nine stations reporting, regardless of size. By looking just above the column headings, we can determine that twenty of the fifty-nine stations reported for the period June 30–September 30, 1979 and that the other thirty-nine stations reported for the period October 1, 1979–March 31, 1980.

To the right, four additional columns represent

*S.I.C. stands for the U. S. Department of Commerce's Standard Industrial Classification numbering system.

Current Data							Comparative Historical Data			
20(6/30-9/30/79)		39(10/1/79-3/31/80)					6/30/76-3/31/77	6/30/77-3/31/78	6/30/78-3/31/79	6/30/79-3/31/80
0-250M	250M-1MM	1-10MM	10-50MM	ALL	ASSET SIZE		ALL	ALL	ALL	ALL
16	27	13	3	59	NUMBER OF STATEMENTS		89	81	70	59
%	%	%	%	%	**ASSETS**	%	%	%	%	%
5.4	7.2	5.8		6.5	Cash & Equivalents		8.6	6.3	9.0	6.5
23.5	19.7	16.9		19.8	Accts & Notes Rec - Trade(net)		19.9	19.4	20.7	19.8
1.1	.1	.0		.4	Inventory		1.1	.2	.6	.4
2.1	3.2	7.4		3.8	All Other Current		1.2	1.5	2.3	3.8
32.2	30.2	30.1		30.5	Total Current		30.8	27.4	32.5	30.5
52.2	44.9	46.1		46.9	Fixed Assets (net)		39.4	43.1	43.6	46.9
6.9	7.4	20.4		11.2	Intangibles (net)		15.2	17.1	11.4	11.2
8.7	17.4	3.5		11.4	All Other Non-Current		14.6	12.4	12.6	11.4
100.0	100.0	100.0		100.0	Total		100.0	100.0	100.0	100.0
					LIABILITIES					
5.7	10.6	5.7		7.7	Notes Payable-Short Term		4.6	5.5	6.0	7.7
13.8	7.4	4.0		8.3	Cur. Mat.-L/T/D		5.7	6.2	4.5	8.3
5.2	7.5	3.6		6.0	Accts & Notes Payable - Trade		5.2	5.8	4.7	6.0
3.4	3.7	4.5		3.8	Accrued Expenses		4.7	5.9	4.5	3.8
5.9	3.3	5.9		4.6	All Other Current		4.7	3.6	2.2	4.6
34.0	32.5	23.8		30.3	Total Current		25.0	27.0	21.9	30.3
35.9	42.7	33.7		38.5	Long Term Debt		32.8	35.9	35.6	38.5
1.3	1.0	3.1		1.7	All Other Non-Current		3.1	7.0	4.1	1.7
28.8	23.8	39.4		29.6	Net Worth		39.1	30.2	38.4	29.6
100.0	100.0	100.0		100.0	Total Liabilities & Net Worth		100.0	100.0	100.0	100.0
					INCOME DATA					
100.0	100.0	100.0		100.0	Net Sales		100.0	100.0	100.0	100.0
					Cost Of Sales					
					Gross Profit					
98.5	89.0	86.4		90.3	Operating Expenses		88.6	95.5	84.3	90.3
1.5	11.0	13.6		9.7	Operating Profit		11.4	4.5	15.7	9.7
-.3	4.7	6.2		3.6	All Other Expenses (net)		4.6	4.0	5.9	3.6
1.8	6.3	7.4		6.1	Profit Before Taxes		6.8	.6	9.8	6.1
					RATIOS					
2.2	1.8	2.1		1.9			2.0	1.8	2.4	1.9
1.2	1.0	1.6		1.2	Current		1.2	1.1	1.6	1.2
.6	.5	.6		.6			.8	.7	1.2	.6
1.9	1.6	1.9		1.8			2.0	1.6	2.3	1.8
1.1	.9	1.2		1.1	Quick		1.1	1.0	1.5	1.1
.6	.5	.4		.5			.8	.7	1.0	.5
40 9.2	44 8.3	41 8.8		42 8.7			49 7.5	50 7.3	45 8.1	42 8.7
53 6.9	61 6.0	58 6.3		56 6.5	Sales/Receivables		57 6.4	59 6.2	54 6.7	56 6.5
64 5.7	66 5.5	66 5.5		66 5.5			73 5.0	69 5.3	64 5.7	66 5.5
					Cost of Sales/Inventory					
10.2	9.1	7.3		8.0			6.4	8.8	6.9	8.0
21.2	INF	12.7		21.9	Sales/Working Capital		23.7	96.7	11.0	21.9
-9.0	-5.2	-9.3		-9.4			-30.5	-13.2	34.6	-9.4
5.7	3.4	6.1		5.8			7.2	5.0	10.0	5.8
(15) 2.0	(22) 1.5	(12) 4.4		(52) 2.2	EBIT/Interest		(65) 3.1	(64) 2.2	(53) 3.5	(52) 2.2
1.1	.3	-.1		.7			1.5	.3	2.1	.7
2.1	2.9			3.1			5.7	2.8	6.1	3.1
(11) .9	(10) 1.9			(32) 1.6	Cash Flow/Cur Mat L/T/D		(45) 2.3	(47) 1.4	(39) 3.0	(32) 1.6
.6	.6			.6			.9	.3	1.7	.6
.9	.8	.8		.9			.6	.9	.8	.9
1.5	2.7	2.6		2.6	Fixed/Worth		1.5	2.2	1.6	2.6
-35.8	-6.9	-6.8		-10.0			-36.0	-6.0	8.0	-10.0
.9	.7	1.1		.9			.6	1.2	.7	.9
2.0	4.6	3.5		4.1	Debt/Worth		2.2	3.1	2.3	4.1
-99.5	-11.6	-12.0		-15.4			-46.4	-11.8	11.0	-15.4
58.3	50.0			57.0	% Profit Before Taxes/Tangible		67.1	81.8	88.2	57.0
(11) 10.4	(19) 18.7			(41) 25.0	Net Worth		(65) 35.5	(55) 23.7	(55) 47.1	(41) 25.0
-4.2	-20.0			-3.1			16.2	4.4	24.1	-3.1
11.5	13.3	22.3		16.3	% Profit Before Taxes/Total		22.6	16.0	21.1	16.3
3.4	4.8	16.3		7.2	Assets		9.2	6.7	10.9	7.2
-1.4	-2.6	-4.6		-1.9			2.0	-2.7	5.5	-1.9
7.3	4.4	5.2		4.4			5.2	4.4	4.6	4.4
2.7	2.4	1.9		2.6	Sales/Net Fixed Assets		3.2	2.8	3.4	2.6
2.1	1.8	1.5		1.8			1.8	1.7	1.8	1.8
2.0	1.6	1.2		1.6			1.6	1.4	1.7	1.6
1.6	1.1	1.1		1.1	Sales/Total Assets		1.1	1.1	1.2	1.1
1.1	.8	1.0		1.0			.8	.8	.9	1.0
2.1	3.4	3.7		3.5			2.9	3.3	2.9	3.5
4.3	5.4	(11) 6.3		(57) 5.4	% Depr., Dep., Amort./Sales		(82) 5.3	4.9	(69) 4.9	(57) 5.4
8.2	6.9	9.4		8.1			8.2	7.7	8.3	8.1
	.9			.8			1.1	1.0	.9	.8
	(13) 1.9			(25) 1.9	% Lease & Rental Exp/Sales		(32) 1.6	(37) 1.8	(33) 1.5	(25) 1.9
	4.5			4.5			2.9	3.3	3.1	4.5
	5.0			6.5			4.6	5.7	7.8	6.5
	(11) 7.2			(19) 10.2	% Officers' Comp/Sales		(32) 7.2	(31) 8.2	(20) 10.0	(19) 10.2
	16.0			19.3			11.9	10.8	16.4	19.3
3723M	16473M	33877M	42328M	96401M	Net Sales ($)		166317M	170380M	116664M	96401M
2363M	13437M	31686M	42783M	90269M	Total Assets ($)		193043M	183606M	100829M	90269M

M = $thousand MM = $million

See Pages 1 through 10 for Explanation of Ratios and Data

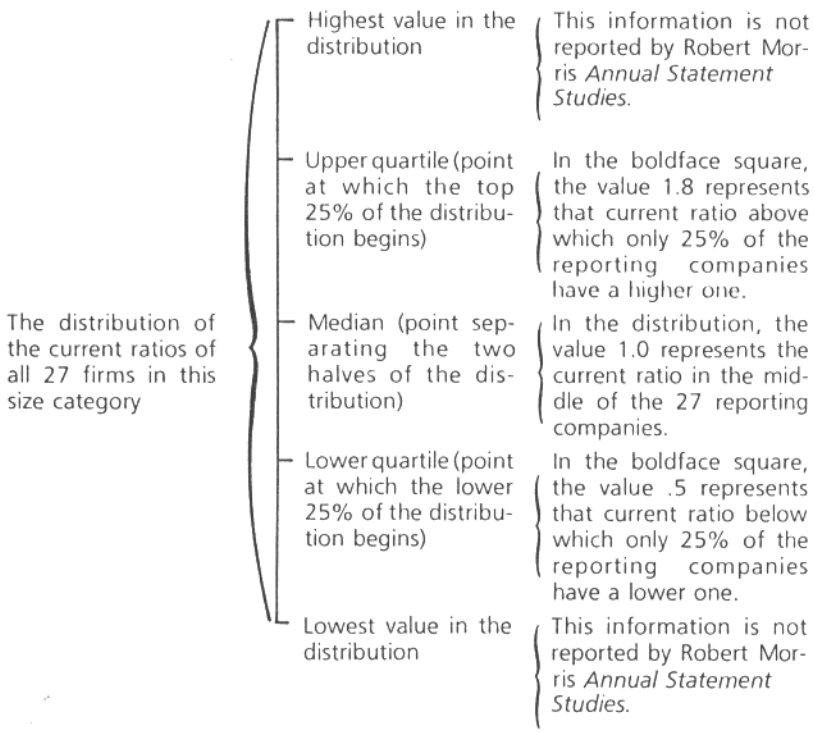
Services - AM Radio Stations, SIC #4832†

historical data from prior years. The right-hand set of four columns lets us see trends developing over the recent past in the industry.

†On page 239 you will find some very useful information from the Robert Morris Associates governing the use of this information.

Everything's Up to Date in Kansas City — Including the Current Ratios

Now look on the left side at the small boldface square. It contains information on one of the most commonly used financial ratios, the *current* ratio. Just as in Chapter 2, this is nothing more than a firm's current assets divided by its current liabilities as a measure of ability to pay its current debts. In the square, we see three pieces of data describing current ratios of firms with $250,000 to $1,000,000 in total assets; what these three pieces of information mean can be explained with a simple diagram:



Do You See the Beauty of It?

With three pieces of information about current ratios of twenty-nine AM radio stations having $250,000 to $1,000,000 of total assets, you can tell a great deal more about current ratios in this industry than you could if you had only one current ratio summarizing all fifty-nine AM stations regardless of their size.

Days and Ratios — Now I'm Really Confused

Now look back at our Robert Morris page again to the small boldface circle. We are in a new category, sales divided by accounts receivable. The three boldface numbers in the

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circle, 58, are days, derived from the three values just to
66

the right of the ones in the circle. Sales divided by receivables is a basic measure of how good you are at collecting your accounts receivable; for example, the 6.3 value tells us that the median company (the one in the middle) has annual sales equal to 6.3 times its receivables. Turned upside down, it has 1/6.3 or 15.9% of its annual sales in receivables. The boldface value 58 in the circle simply converts this 15.9% into days, like this: 15.9% × 365 days = 58 days. Voila! On average, this company collects the money from its sales about 58 days after billing. So we can have this ratio in the form of a number (6.3), a percentage (15.9), or in days (58). Very useful.

Now look at the figure (19) in the boldface diamond at the bottom of our sample Robert Morris page. This value tells the number of companies that reported information whenever the number is less than the number heading the entire column. We know from the column heading that fifty-nine companies provided information for this column; however, the value (19) shows that only nineteen of those fifty-nine companies provided any information on

the ratio of their officers' compensation to their total sales. Whenever you see a value in parentheses like this, it means that fewer than the total number of reporting companies have provided a particular piece of information.

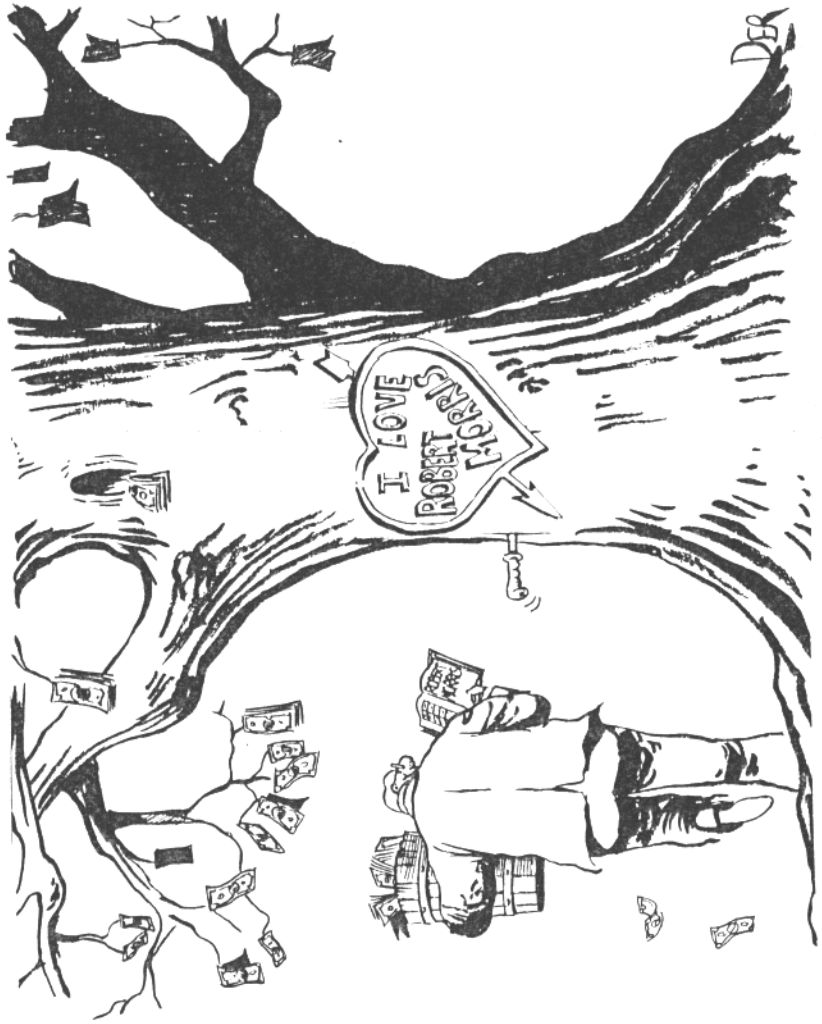
Forewarned Is Forearmed

The Robert Morris Associates' *Annual Statement Studies* gives bank loan officers quick access to the financial profile of a wide variety of industries — probably including yours. So when you walk through that banker's door to ask for a loan, he or she can compare *your* financial statement with others, and come to some conclusion as to how you're doing. But, here's the good news; you can get the very same information by trotting down to your local business school library and pulling *Annual Statement Studies* off the shelf. Or you can order a copy of your own by writing to Robert Morris Associates, 1616 Philadelphia National Bank Building, Philadelphia, Pa. 19107. Sort of evens things up.

Robert Morris, Meet Leo Troy

If you don't like trotting out of your office to get this information, or if your company is located in Iron City, Nevada, 256 miles from the nearest business school library, you can purchase a book with similar information — specifically, *Almanac of Business and Industrial Financial Ratios*, by Leo Troy, available from Prentice-Hall, Inc., Englewood Cliffs, N. J. (who, by the way, are also the fearless entrepreneurs who published the raffish little book you are now reading).

Dr. Troy updates his book every year, so you can buy the latest information rather easily. Dr. Troy's source of information is the tax returns of companies filed with the IRS; his book is a compendium of financial information on approximately 170 different categories of companies. One very interesting and useful feature of Dr. Troy's book is the two different performance categories for



reporting. First he reports information on all companies in a particular industrial grouping whether they made a profit or not. Then, on a separate page, he reports only those companies in that industrial grouping that did make a profit.

Look on the next page for a sample from Dr. Troy's book; you'll see a whole lot of financial information on profitable companies in the lumber and construction materials business. From the row headed "Number of establishments" you can determine by looking under column A — just like a Chinese restaurant — that 6,947 companies provided the information from which this page was distilled. Wow! That's a lot more companies than the 59 AM radio stations we were dealing with in *Robert Morris*. And looking across the top row from columns B through I, we see that Dr. Troy has provided us with eight size categories among those 6,947 companies. Applying the Lord giveth and taketh away doctrine, however, we find the information in the body of the table to be not quite as detailed as that we got from *Robert Morris*; for instance, no statistical distribution in the form of medians and upper and lower quartiles. (Most of you will probably shout with joy at that loss.) Furthermore, Dr. Troy provides fewer ratios than does Robert Morris Associates. For example, you won't find information on asset turnovers (i.e., total sales divided by total assets).

What's in It for You

Well, if you run a company in a fairly standard line of business and want to compare yourself with others in that business, both Robert Morris Associates and Dr. Troy will help you considerably. On the other hand, if you manufacture corrugated steel pipe, maple flooring, or fabricated roof trusses, or if you install ceiling tiles, neither Robert Morris nor Dr. Troy has anything you can draw a bead on.

But wait. You still may not be alone with your ratios. Isn't there a national association for *everything* in the United States — folks who collect hummingbird eggs, folks who save only large stamps colored blue, and perhaps

Corporations with Net Income:
Wholesale Trade, Miscellaneous Wholesale Trade,
Lumber and Construction Materials

Item Description for Accounting Period 7/74 Through 6/75	A	B	C	D	E	F	G	H	I
		Size of Assets in Thousands of Dollars (000 omitted)							
	Total	*Under $100*	*$100 to 250*	*$250 to 500*	*$500 to 1,000*	*$1,000 to 5,000*	*$5,000 to 10,000*	*$10,000 to 25,000*	*$25,000 to 50,000*
1. Number of establishments	6,947	1,752	1,566	1,438	1,213	891	56	21	10
2. Total receipts ($ millions)	14,175.6	352.9	857.7	1,867.5	2,923.0	4,941.6	1,260.1	683.0	1,289.8
	Selected Operating Factors as Percentage of Net Sales								
3. Cost of operations	81.2	73.4	79.2	77.3	79.7	81.3	84.8	82.4	89.6
4. Compensation of officers	2.2	6.4	3.7	3.3	2.5	1.9	1.0	.8	.4
5. Repairs	.3	.1	.4	.3	.3	.3	.3	.2	.1
6. Bad debts	.4	.3	.3	.5	.6	.4	.2	.4	.2
7. Rent on business property	.5	.8	.8	.5	.6	.5	.3	.5	.3
8. Taxes (excl. federal tax)	1.1	1.4	1.3	1.3	1.3	1.1	.9	1.1	.6
9. Interest	1.0	.5	.6	.4	.7	.8	.6	1.3	3.8
10. Deprec., deplet., amortiz.†	.8	.9	.8	1.0	.8	.8	.8	.9	.8
11. Advertising	.2	.3	.2	.2	.3	.2	.1	.2	.3
12. Pensions and other benefit plans	.5	1.0	.2	.4	.5	.5	.4	.5	.2
13. Other expenses	9.8	11.8	10.4	11.2	10.6	9.9	8.8	7.8	6.0
14. Net profit before tax	2.1	3.0	2.2	3.5	2.1	2.4	1.8	3.9	#

†Depreciation largest factor.

Adapted from Leo Troy, *Almanac of Business and Industrial Financial Ratios,* 1978 edition (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1978), Table II, p. 211.

**Corporations with Net Income:
Wholesale Trade, Miscellaneous Wholesale Trade,
Lumber and Construction Materials (Continued)**

Item Description for Accounting Period 7/74 Through 6/75	A	B	C	D	E	F	G	H	I
	Size of Assets in Thousands of Dollars (000 omitted)								
	Total	*Under $100*	*$100 to 250*	*$250 to 500*	*$500 to 1,000*	*$1,000 to 5,000*	*$5,000 to 10,000*	*$10,000 to 25,000*	*$25,000 to 50,000*
	Selected Financial Ratios (number of times ratio is to one)								
15. Current ratio	1.9	2.1	2.1	2.3	2.0	1.9	1.9	2.1	1.3
16. Quick ratio	1.1	1.5	1.4	1.5	1.1	1.1	1.1	1.1	.8
17. Net sales to net working capital	8.5	11.7	7.7	8.2	8.5	8.5	10.0	6.8	8.3
18. Net sales to net worth	6.5	12.4	5.6	6.4	7.4	6.5	5.8	4.6	7.0
19. Inventory turnover	8.4	25.2	8.4	10.4	8.9	7.8	7.9	6.9	12.0
20. Total liabilities to net worth	1.2	1.3	.8	.8	1.2	1.1	.8	1.0	3.3
	Selected Financial Factors in Percentages								
21. Current liabilities to net worth	89.2	93.6	64.7	59.2	86.7	81.5	64.4	63.6	—
22. Inventory to current assets	36.6	26.0	33.0	35.1	41.2	40.6	38.7	41.1	24.1
23. Net income to net worth	17.0	40.6	17.9	23.7	16.3	16.3	11.2	19.5	11.8
24. Retained earnings to net income	45.9	54.1	87.2	39.1	86.3	82.8	85.4	—	81.7

even folks who manufacture corrugated steel pipe? Right you are, and you get an "A" for brilliance. There is such an association for corrugated steel pipe manufacturers. It's called the NCSPA, the National Corrugated Steel Pipe Association; it's headquartered near Chicago, Illinois; and it's headed up by a very bright young man, let's say John.

John happens to believe that associations ought to have a good bash when they go off to resorts for their annual convention, but he also knows that, if having fun is all your association does in Atlantic City or Lake Tahoe or wherever, it won't be much help to the members, and it surely won't last long. So John busies himself collecting financial information every year from his member manufacturers of corrugated steel pipe, then works with a national accounting firm to sort, tabulate, and array that information in useful form, which he distributes to his association members. John's not alone. I personally work with seventeen associations to design and offer seminars in accounting, finance, and tax, all seventeen of which do the same thing as John at NCSPA. And I imagine there are at least a thousand others who do it too.

The ability to compare yourself with others is one of the real benefits of belonging to an association. (If your association director doesn't like this and doesn't provide the information, fire him. That's right, fire him.) In this particular instance, the NCSPA publishes an annual ratio survey with two different size categories. You'd love it — it includes all the terrific statistical information *Robert Morris* gives you too — oh, joy! This survey then becomes the basis of the NCSPA annual financial management seminar as well as provides members with a yardstick for comparing their operating results with those of all the other folks in the corrugated steel pipe business. Sort of like checking around the locker room, an adult version.

Caveat Lector

Ratio analysis is an excellent tool, but there are problems with using ratios that do not meet the eye. In the first place, folks tend to report information from their historic

financial records and not from their market value balance sheets. Furthermore, many surveys don't tell enough about the officers' compensation package for us to know what is profit and what is before-tax salary taken out. And few people ever report information that didn't come from their books kept for taxes — but we're not the IRS.

In short, there are an awful lot of ways people keep books, and ratio surveys sort of have to put all those together into one pot to calculate ratios. And I haven't even mentioned the problem of geographic cost differentials — you know, it costs more in labor to manufacture wooden pallets in Midlands, Michigan, than it does in Midnight, Mississippi, so comparisons of Midnight and Midlands are often odious. Neither do we know from most studies about who owns the real estate, how much money the kids are paid in salaries for work they don't do, or who keeps up the house at the beach, the airplane, and the five cars. Finally, many ratio studies are static. That is, they don't show trends over long enough periods of time to reveal consequential events and forces that may be acting on an industry. To say it another way, looking at last year may win the battle for you but lose the war if you are in the buggy whip business. Get it? *Conclusion:* Ratios aren't perfect, but they're better than stark ignorance.

Once More with Feeling

If there weren't a size 36-D, a 32-AA might be considered downright bosomy! If there weren't a par, I and a million other folks would be a hell of a golfer. Yeah, and if there weren't a company in your line of business that made 45% after taxes on investment, your 9% might look heroic. Alas, we all pale next to the champion — ratios give us two things: (1) a way of determining how we are measuring up to other folks who do the same kinds of things we do for a living and (2) a method of examining our financial performance in an orderly way, moving through our operation step by step. If we have *not* measured up, chances are that we can find the reasons somewhere in our books. That, gentle reader, is the subject of the second part of this

chapter: how to conduct such a step-by-step analysis of your company.

TRACKING THE GREAT ELUSIVE PROFIT MONSTER

Our procedure will be to go back to Chapter 2 and reproduce Bay Area Corrugated's balance sheet and income statement for its latest reported year. Then we will reproduce for you part of the ratio analysis provided to Bay Area, Inc., by its national association, the National Corrugated Steel Pipe Association (NCSPA to its friends). Then we'll go through a step-by-step analysis of Bay's balance sheet and income statement using industry ratios as the basis for comparison. Finally, we'll suggest some things Bay could do to improve its performance. During all this, we'll make some off-color comments about people we know, the meanings of these ratios, mistakes folks make in their interpretation and use, and what it all means for national defense. Up, up, and away!

The NCSPA reports the median (middle) value for each ratio and also the *highest* and *lowest* value for all those firms that participated in the ratio study this year. This gives us something that good old *Robert Morris* doesn't (i.e., who was best and who was worst as opposed to the *Robert Morris* report of upper and lower quartiles).

TRACKING THE GREAT ELUSIVE PROFIT MONSTER . . . OFF WE GO

How'd We Do, Coach? Ratios 10 and 14

Net Profit to Net Sales: First thing we do, we find out how we did — and how we did starts with ratio 10, net profit before taxes divided by net sales. In Bay's case this turns out to be $620,000 ÷ $24,000,000 = 2.6%. Ow. A quick look back at the ranges reported for ratio 10 on the preced-

Balance Sheet
Bay Area Corrugated Pipe, Inc.
December 31, 19X2

Assets				
Current assets				
Cash	$ 560,000			
Marketable securities	80,000			
Accounts receivable (net of est. bad debts)	4,600,000			
Inventory	7,200,000			
Prepaid expenses	160,000			
Total Current Assets				$12,600,000
Fixed assets				
Land			200,000	
Fabrication shop and office	2,500,000			
Furniture	50,000			
Trucks and machinery	1,700,000			
		4,250,000		
Less: Accumulated depreciation		1,050,000		
Net fixed assets			3,200,000	
Total fixed assets				$3,400,000
Total assets				$16,000,000
Liabilities				
Current liabilities				
Accounts payable	4,420,000			
Notes payable	1,930,000			
Accrued expense	280,000			
Long-term note (current portion)	700,000			
Total current liabilities		$7,330,000		
Long-term liabilities				
Mortgage note payable		2,800,000		
Total liabilities				$10,130,000
Equity				
Capital stock			500,000	
Retained earnings			5,370,000	
Total equity				$5,870,000

Trail Sign Profit and Loss

Income Statement
Bay Area Corrugated Pipe, Inc.
Year Ended December 31, 19X2

Gross Sales	$24,800,000	
Less: Returns and allowances	800,000	
Net sales		$24,000,000
Expenses		
Cost of goods sold	19,100,000	
Depreciation	680,000	
Sales and administrative expense	2,690,000	
		22,470,000
Operating profit		$ 1,530,000
Less: Interest		910,000
Net profit before taxes		$ 620,000
Provisions for income taxes		300,000
Net profit after taxes		$ 320,000

Signs of Other Hunters

NCSPA Ratio Analysis, 19X2
(abbreviated, firms with over $5,000,000 sales)

	Highest	Median	Lowest
1. Quick ratio	4.3	1.1	.4
2. Current ratio	9.4	1.8	1.0
3. Receivables turnover	11.8	9.9	5.2
4. Inventory turnover	15.9	6.3	2.7
5. Asset turnover	5.2	2.7	1.5
6. Noninterest-bearing current liabilities to total assets (%)	29.7	13.4	2.6
7. Long-term debt to stockholders' equity	3.9	.4	0
8. Fixed asset turnover	19.1	13.7	7.5
9. Current asset turnover	4.4	3.3	1.9
10. Net profit before tax to net sales (%)	10.8	6.7	2.2
11. Cost of goods (%)	81.5	77.8	74.3
12. Selling and administrative expense (%)	19.2	13.7	5.3
13. Financing costs (%)	4.0	1.7	.8
14. Net profit before tax to stockholders' equity (%)	52.4	24.9	8.5
15. Net profit before tax to total assets (%)	23.9	15.3	3.9
16. Working capital turnover	16.1	6.9	2.3

ing page indicates that we are definitely below the median but not the worst reporting company. A near miss. Our profit to sales performance is less than half of the median (which is 6.7%) and about a quarter of the best performer (10.8%). Definitely lots of room for improvement.

Note, however, that we need to be sure that we have measured company profit here and not excessive diddling. If we employ nine relatives, pay ourselves $50,000 a year more than the job is actually worth, and diddle for another $50,000 a year (cars, boat, plane, travel, etc.), then let's be careful — our corporation's profit is probably greatly understated. The president of Bay, Inc., reminds himself that his salary is $25,000 lower than what he heard at the convention this spring and that he hasn't done much diddling at all in the last three years. Thus it's safe to conclude that 2.6% is *not* a sterling performance, and something is amiss.

Net Profit Before Taxes to Stockholders' Equity: Let's double-check our profit to sales performance by looking at what our *equity* in the corporation actually earns. Of course, we want to earn profit dollars, but profit alone is not the name of the game in business today. What we have to do is earn enough on our *equity* in the company — otherwise we might as well take it out, invest it in tax-free bonds, buy a 42-foot Bertram, and head for the Gulf Stream. Look now at ratio 14, before-tax return on stockholders' equity. The industry median is 24.9%, with a high and low of 52.4% and 8.5%, respectively. Ours at Bay is $620,000 ÷ $5,870,000 = 10.6%, pretty far down toward the low end of the distribution. Not good news at all, especially at times when tax-free municipals earn about the same. Better call our business broker and put in an order for the Bertram. Hold it! Give us a couple more pages before we do anything rash.

Are They Working out There?
Ratio 11

Cost of Goods: Unless Bay, Inc., is guilty of underpricing, the rather miserable profit performance ought to be explained out in the plant (production costs), in the office

(out of control selling and administrative expenses), or in financing (interest costs). First, go out to the plant for a look.

Ratio 11 for NCSPA shows a median cost of goods of 77.8%, with a high of 81.5% and a low of 74.3%. Bay, Inc., comes in at $19,100,000 ÷ $24,000,000 = 79.6%, so we're in the ballpark here. Maybe there's some room for improvement, but clearly cost of goods is not the reason for our lousy profit to sales performance. We make a mental note to spend Saturday morning with the plant foreman and work up some cost reduction goals for the spring. Then we go back to our witch-hunt.

Who's in Charge of Peddling and Bookkeeping? Ratio 12

Selling and Administrative Expense: We duck inside the office for a comparative look, armed with industry information on ratio 12, selling and administrative costs. We remind ourselves that the industry practice is to *include* depreciation here, so we'll have to do the same to get comparability. We see that the industry median here is 13.7%, with a high and low of 19.2% and 5.3%, respectively. Our own selling and administrative expense (including depreciation) is $2,690,000 + $680,000 ÷ $24,000,000 = 14.0%, so we seem to be right in the middle of the pack. Could we improve anyhow? Maybe those selling expenses do need controlling after all, and I wonder if we've got to have *all* those folks working in the office. Never considered that each extra administrative employee adds almost .1% to this ratio. Damn! And we've got 19, no — added cousin Joey last week — make that 20 working in the office right now.

Bankers Dues Maybe: Ratio 13

Financing Costs: With increasing interest rates, many associations have begun the practice of breaking out financing costs. This is an excellent practice for two reasons: (1) it raises the visibility of financing costs, and (2) it moves your attention from the income statement to

the balance sheet. The balance sheet is where you *must* look if you are ever going to find the reason for high financing costs. OK, pipemakers, let's look at interest expense as a percentage of net sales in our industry. The middle of the distribution is at 1.7%, with a high and a low of 4.0% and .8%, respectively. We can cipher our financing cost quickly as $910,000 interest expense ÷ sales of $24,000,000 = 3.8%, which puts us right up there with the Big Borrower. Red flag for sure — looks as if there's too much money borrowed. And, dammit, we have those enormous retained earnings inside the business supposedly doing their part to finance it too. Something ain't right.

Time out

Seventh inning stretch, time to look back, to get the score up to date and see how far we've come. OK, here's what we've found so far:

1. Our profit to sales ratio of 2.6% needs to come up to 6.7% *just* to get us to the middle of the pack in our industry. That means 6.7% − 2.6% = 4.1% lower cost as a goal.
2. Our cost of goods at 79.6% is almost two percentage points higher than the industry median of 77.8%, or 79.6% − 77.8% = 1.8%. Suppose we get this item down to the median. Then 4.1% lower cost − 1.8% reduced cost of goods = 2.3% cost reduction left to go. Gettin' there slowly.
3. Our sales and administration expense ratio of 14.0% is .3% above the median. Not much change; 2.3% to go − .3% potential reduction here still leaves 2.0% yet to be cut.
4. Our financing costs are 3.8% of sales, and the industry median is only 1.7%. The potential cut here just to get down to the middle of the pack is 3.8% − 1.7% = 2.1%. So if we could do it, our 2.0% to go − 2.1% potential cut here brings us about even with the board.

Some Conclusions at This Point

Not to run around, get drunk, sing with joy, and buy a hand-held calculator to cipher more ratios, no sir!! What we've said and done is full of assumptions, watch:

1. We've assumed Bay, Inc., wants to operate at least as well as the median industry company.

2. We've assumed Bay, Inc., management wants (read that "has the guts and drive") to do whatever it takes to get there.
3. We've assumed Bay's financial statements and ratios *are* comparable with the industry ratios.
4. We have not assumed that Bay wants to accomplish anything *more* than a *median* performance, which may be the most cynical assumption we've made.
5. We've taken a mechanical, that is, numerical, perspective on the whole comparison so far. We've assumed that, if others do it, then Bay can do it. Well, this may be safe when the goal is only to be as good as the median. Take heart — the median golf score for those who play regularly is 101.
6. What can we assume about personnel? We've said nothing about Bay's people. If the company is full of room-temperature I.Q. twits, not even an enlightened management can raise company performance much — probably not even to the median. Leading a bunch of twits with one person doing all the work isn't much of anything!
7. And watch this one. Reducing cost of goods a point or two and getting rid of a couple of drone salespersons and firing one or two twits out of your office is child's play. But rearranging your balance sheet so that you don't need to borrow all that damn money or use all those retained earnings is big league — hard to do. So, hang on. Even if Bay, Inc., gets on its horse, races through the forests of production and selling and administration, killing all the dragons as it goes, all it will have is three quarters of the solution to its desired return of 6.7% on sales. Getting the other one quarter to complete the solution will require management to go to work on the balance sheet. After all, if you owe all that money and use all those retained earnings, it must be because you have a lot of assets to use it on. Simple as that. So hang on to your hat while we race around the balance sheet and look for damsels in distress there. (And you thought we had it all wrapped up.)

TRACKING THE GREAT ELUSIVE PROFIT MONSTER DOWN A NEW PATH

Feast or Famine: Ratios 5 and 15

Asset Turnovers: The asset turnover ratio has come in for increased scrutiny lately for a good reason: it costs too much money to finance a lot of current and fixed assets.

Just look how Bay, Inc., is suffering. As a result, folks at financial society luncheons have begun to talk "asset management." In plain English, they mean keeping just enough of everything on hand to do business and nothing more. No surpluses of anything. Running lean.

To get asset turnover, you divide total sales by total assets. In Bay's case this is $24,000,000 ÷ $16,000,000 = 1.5. Now what've we got? The value 1.5 can be thought of as indicating that Bay gets $1.50 of sales out of every $1.00 it has invested in assets. (If this point isn't transparently clear, just take it as an article of faith now, and wait one more chapter. Chapter 6 goes into so much excruciating detail on this very point that, by the time you've finished reading it, you will know more about asset turns than you *ever* wanted to learn. So for now, take it as given.)

Let's look at the industry study. Ooops! Bay is all the way at the bottom, the lowest in the whole corrugated pipe industry in asset turns: 1.5 turns for Bay versus the industry median of 2.7. This tells us the median company gets $2.70 of sales out of every dollar of its assets and that the top company gets $5.20 (an asset turn of 5.2). Now there's a screaming indictment. Bay, Inc., is the absolute pits when it comes to asset management, with *too damn many assets* ($16,000,000 net book value) for its sales volume ($24,000,000). No wonder it has to borrow all that money and keep all those retained earnings in the company. Look at what it uses to make pipe — $16,000,000 worth of plant and equipment and inventory. Somebody has to pay for them!

Net Profit Before Taxes on Total Assets: Another cut at the issue of asset management can be taken by using ratio 15. In Bay's case, net profit before taxes on total assets turns out to be $620,000 ÷ $16,000,000 = 3.9%, meaning that every dollar of assets Bay has invested earns a return of less than 4% before tax. The industry median here is 15.3%, with a high of 23.9% and a low of — that's right, you guessed it — Bay's own 3.9%. "Lord, help them," you say, "they don't earn enough on their assets to pay for financing them — they'd do better putting the whole mess in something that earned more

than 4% before taxes and go fishing." Right on, I say, you're learning fast! But whoa just a second. If your salary of $145,617.87 came out before taxes and if you're paying for a beach and a mountain house through the company, and if you just bought a Lear 55 — "Wait, wait," you say, "I read Chapter 2. I think I'll stay in the pipe business and try to clean it up some more . . . then maybe sell it."

Where Have All the Assets Gone?
Ratios 8 and 9

Fixed Asset Turnover: Everything's gotta be somewhere, assets too! If they ain't here, they gotta be there; it's as simple as that. Oh yeah, I forgot the automobile dealer's fence (the one the IRS field auditor found around the dealer's house instead of around his sales lot). OK, fixed assets: if they ain't here and they ain't there, then maybe they're out at the lake. But, hell, even out there someone has to get the money to pay for them. Ratio 8, fixed asset turnover, is just a refinement of ratio 5, which gave us total asset turnover. Ratio 8 for Bay, Inc., is total sales divided by net *fixed* assets, or $24,000,000 ÷ $3,200,000 = 7.5. This translates into how many sales Bay manages to get out of every dollar of its fixed assets. Checking out the industry study, we quickly see that Bay's fixed asset turnover of 7.5 is a winner again, but in the wrong race. With an industry median fixed asset turnover of 13.7 and a top performance of 19.1 turns, Bay comes a cropper here. The obvious conclusion: far too much invested in plant and machinery.

So what would it take Bay to get back in the race and draw even with the median firm at its fixed asset turnover of 13.7? One alternative would be for Bay to operate at its current sales level of $24,000,000 with

$$\frac{\$24,000,000}{13.7} = \$1,751,825 \text{ of fixed assets}$$

or roughly half of what it has now. Looking at it from the other perspective Bay could do

$ 3,200,000	(Bay's fixed assets at present)
× 13.7	
$43,840,000	(Worth of business)

on its present fixed asset base. So you say the first alternative will be the easier one to implement, that is, doing about the same sales volume on fewer assets. Well, you may be right; Bay could always start by selling the plant to the family and leasing it back (we'll cover the smart way to do this in Chapter 8). Regardless of which direction Bay heads off in, it's clear that it has too many fixed assets for the volume it does. Maybe Bay needs to call the truck dealer and cancel its order for that new eighteen-wheeler.

Current Asset Turnover: Look now at ratio 9. For Bay, Inc., we calculate this turnover to be $24,000,000 ÷ $12,600,000 current assets = 1.9 turns. By now you know what this means: Bay does about $1.90 in sales off every dollar it has in current assets. What does the industry do? Well, we see a median current asset turnover of 3.3, with a high of 4.4, and poor old Bay at the bottom of the heap reporting a 1.9. It's obvious this time that Bay has too much tied up in current assets for its volume. Exactly where those excess current assets are is the subject of the next section.

When Is Enough Too Much?
Ratios 1 and 2

The quick ratio, 1, and the current ratio, 2, measure the adequacy of current assets. The current ratio tells us whether we have enough current assets on hand (i.e., cash, marketable securities, notes receivable, accounts receivable, inventory, and prepaid expense) to pay our current liabilities. It is calculated in Bay's case by taking

Cash	$ 560,000
Marketable securities	80,000
Accounts receivable	4,600,000
Inventory	7,200,000
Prepaid expense	160,000
	$12,600,000

and comparing this $12,600,000 with Bay's current liabilities of $7,330,000, this way:

$$\text{Current ratio} = \frac{\$12{,}600{,}000}{\$\ 7{,}330{,}000} = 1.7$$

You can read that 1.7 as $1.70 of current assets for every $1.00 of current liabilities. A quick look at the industry ratios brings joy. At last, here's a ratio we need not be ashamed of. With an industry median of 1.8, a high of 9.4 and a low of 1.0, Bay, Inc., is somewhere in the bottom half, but not at the very bottom. What a relief!

Is 1.7 enough? That's the question. The answer is a firm *yes!* At least it's yes everywhere you look except in accounting books and bankers' minds. Bankers love a high current ratio because it assures them of being paid back their short-term loans. Bankers begin to get smiles when the current ratio goes above 2.0. And many good accounting books suggest that a current ratio of at least 2.0 is a worthy goal. Bull! It's a good goal only if you're working for the bank or for your accountant, but *not* otherwise.

Getting your current ratio up to and above 2.0 takes too many current assets, and you know now what *that* does for return on stockholders' equity. Getting a current ratio to 2.0 relieves your banker of worry and relieves your accountant from doing some of the important, nonbean-counting tasks he should be working on every day. But it does absolutely nothing for you.

For an example of the absolute absurdity of a current ratio that high for all companies, look at the case of a chain of convenience stores that sells for cash, replenishes its inventory at least once a week, and gets thirty days from its suppliers to pay for the inventory. Now just what sense does it make for it to have a current ratio much over 1.0? In fact, it makes no sense. Maybe that's why Hop-In Stores, Inc., a successful publicly held convenience store chain in Virginia reported a current ratio of *less than* 1.0 on one of its year-end statements. Nothing to worry about — if

you're paying your bills on time, whatever you got is enough. Doctrinaire views on current ratios of 2.0 and above are best saved for accounting professors and bankers, neither guaranteed to know much about business anyhow!

To be sure, your banker may pressure you to get your current ratio up near 2.0, but if you can diddle, as we talked about in Chapter 2, then you can diddle your banker here too. Bay's current ratio is even a tad high, I'd say. The industry high here is 9.4, which is purely absurd! The only possible justification I can think of is that they've just collected a lot of bills and have inventoried the money for a while.

Quick, Quicker, Quickest

Folks often compute another form of the current ratio called the quick ratio. It's just like the current ratio except that you count as "quick current assets" only cash, marketable securities, short-term notes receivable, and accounts receivable. (You leave out inventory, not a quick asset to dispose of.) In Bay's case, the total of quick current assets is

Cash	$ 560,000
Marketable securities	80,000
Accounts receivable	4,600,000
	$5,240,000

When we compare this with current liabilities, we get

$$\text{Quick ratio} = \frac{\text{Quick current assets}}{\text{Current liabilities}} = \frac{\$5{,}180{,}000}{7{,}330{,}000} = .71$$

So Bay has 71 cents of quick current assets with which to pay every dollar of its current liabilities. Guess what your banker would like you to have: 1.0 of course. And authors of accounting books even say such things as, "It is generally deemed prudent to have a quick ratio of at least 1.0." Look, it comes down to whether you're working for

yourself or working for your banker or working for some professor with holes in his shoes who wrote an accounting book. You figure it out. I say that Bay's quick ratio is just fine, maybe even high. Look at the industry study. It's clear Bay isn't on the bottom either.

Firms seem to get along just fine with quick ratios of much less than 1.0 in spite of accounting books. In fact, half the corrugated pipe industry has a quick ratio of less than 1.1. Figures don't lie. It all comes down to this: What current assets do you need to pay your bills on time? If a quick ratio of .6 is enough, so be it. If you need 1.0, do it! Just remember that, anytime you get a quick ratio or a current ratio higher than whatever you need, you are reducing your asset turns, enabling your banker to sleep better, relieving your internal accounting professionals from doing their job, and generally rewarding everybody but the equity holders in the crowd. Run lean. Less is more.

Partners in Crime: Ratios 3 and 4

Receivables and Inventory: The two largest entries in the current assets column for most companies are accounts receivable and inventory. And when you find a company like Bay, Inc., with its current asset turns out of control, the reason is found somewhere between receivables and inventory.

It's easy to calculate receivables turnover. All you do is divide sales by receivables: $24,000,000 ÷ $4,600,000 = 5.2. This figure is quickly converted into days by dividing it into 365: 365 ÷ 5.2 = 70.2 days' sales are in receivables. This means that, on average, Bay's accounts receivable are outstanding for almost two and a half months — and that's a bunch. The older you let your receivables get before you collect them, the more money you have to borrow to finance the company. (And since you aren't using your customers' money, you have to use your own.) *And* the longer you wait to collect them, the less collectible they become. All the studies show that; folks just forget about paying you after awhile.

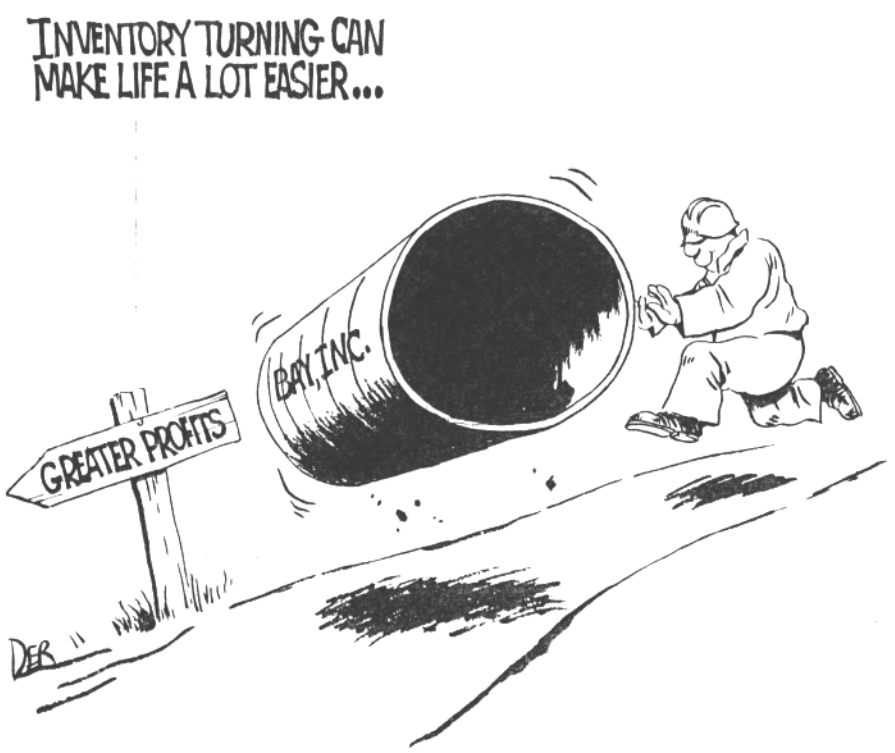
The industry ratio analysis indicates a median receivables turnover of 9.9, with a low of 5.2 and a high of 11.8. You guessed right again. Bay, Inc., comes up a cropper here, winning the industry prize for worst performance of a long-running comedy. For comparison, look at the industry high of 11.8 and convert that to days: 365 ÷ 11.8 = 30.9 days. Somebody collects the receivables every month, just the way they're billed! Look at Bay's situation from another perspective.

If Bay got on the ball and collected its bills so that it reached even the median receivables turnover of 9.9 — say, 10.0 to make the arithmetic simple — then Bay could get by with $24,000,000 ÷ 10.0 = $2,400,000 in receivables instead of its present $4,600,000. This is a reduction of $2,200,000, which means that it wouldn't have to pay interest to borrow that $2,200,000; and that would be a big step forward.

An achievable goal for any company with its management head screwed on straight is a receivables turnover of 8.0, which comes out to be about 45 days' sales in receivables. Of course, if your own receivables turnover is all the way down to 5.0 or 6.0, and if you are charging your customers, say, 2 or 3% a month interest, and if they are paying it, well then that's not a bad deal. On the other hand, if, like Bay, you are paying through the nose for current asset financing, then pick up the phone and ask for the check. And write 500 times: I *will* collect early, I *will* collect early, I *will* . . .

One simple warning about receivables: remember that if your accountant caught your receivables account in an unusual condition when he pulled your statements, then this ratio may be misleading. It's like the old farmer who owed all his money just before the crop came in. A month later, he owed nearly nothing. Watch for distortions like this in any ratio analysis.

If your excess current assets are not in receivables, they will probably be found in inventory somewhere around your company. Your own penchant for "collecting" inventory is measured by ratio 4, inventory turnover, calculated by dividing cost of goods sold by inventory (since



inventory is shown on the balance sheet at cost, we must compare it with the *cost* of sales; you remember apples to apples). In Bay's case this is $19,100,000 ÷ $7,200,000 = 2.7. OK, how did those other pipemakers do on this one? Wow, we get the booby prize again. No one out there is worse than Bay, Inc., at hoarding inventory. We must be waiting for all that corrugated culvert pipe to turn into valuable antiques. But let's not feel too guilty; let's get to work. After all, someone else out there is doing a fantastic job at turning inventory (15.9 turns a year), equal to about 365 ÷ 15.9 = 23 days' inventory, and I bet they're not geniuses either. But watch it, use common sense. If your accountant showed up to take inventory for this analysis just after you made the largest shipment of your life, then of course he or she is going to find minimum inventory, the level of which *won't* reflect your typical performance.

If Bay, Inc., thought it were tough enough to get its inventory turnover up just to the industry median (6.3), look what would happen. At that point, it would require only $19,100,000 ÷ 6.3 = $3,031,746 in inventory, thereby freeing up $7,200,000 − $3,031,746 = $4,168,254, for which money would no longer have to be borrowed or interest paid.

Bay would love Charlie, a former student of mine. Once in an accounting class the various inventory methods were being discussed; you know, LIFO (last-in, first-out), FIFO (first-in, first-out), and all that good stuff. Charlie volunteered, after looking at the ratios, that it was clear to him that his furniture company had pioneered in the use of a new inventory method: FISH — first-in, still-here.

Using Other Folks' Money for a Change: Ratio 6

Noninterest-Bearing Current Liabilities to Total Assets: Of course, the way not to borrow any money to run your business (and not to use your own) is to use other people's money — for instance, just like the federal government when it requires you to pay your quarterly income tax declaration or when the government deducts it from a wage earner's weekly paycheck. What a nice way for Uncle Sam to solve *his* financing problems. Well, it's fun to kick the Feds around, but you know and I know they're not alone.

In business, the name of this practice is "leaning on your suppliers," and, yes, there is even a ratio that measures "how well you lean." Look at ratio 6, noninterest-bearing current liabilities divided by total assets. That rather formidable mouthful of words simply gathers together all the current liabilities you owe without paying interest — which is Bay's accounts payable at $4,420,000 — and then divides this figure by total assets — $16,000,000 for Bay. Bay's quotient is $4,420,000 ÷ $16,000,000 = .276, which can be interpreted to mean that Bay, Inc., finances 27.6% of all its assets by using

trade credit extended to it by its suppliers. In simple terms, Bay, Inc., "pays late." Remember in computing the "pay late" index, we use only current liabilities on which you are *not* paying interest. When your suppliers start charging you 3% a month to carry you, there is nothing free about that anymore.

Let's look at the "paying late" practices of the corrugated pipe industry. With a median of 13.4%, a top of 29.7% and a low of 2.6% we see quickly that Bay, Inc., is one of the front runners here — not a winner yet, but at least a place or show. (That 2.6% really earns the dunce's award — unless they are getting substantial discounts for paying early.) Of course, you remember the old adage, "Necessity is the mother of invention"; it never applied more than it does to paying late. It's funny how running out of money makes you stretch your payables.

What would Bay, Inc., have to run out of to collect its receivables as well as it stretches its payables? Actually, anything over 20% "free trade credit" is good performance. Most larger suppliers are too well organized and have billing systems that are too effective to permit most people to go much beyond that figure. Bay, Inc., deserves and gets a gold star here for its efforts. Uh, do I hear some polite throat clearing from the back of the room? Well, if you think you deserve a medal, slip in and do a random check of your accounts payable for last week and see if any check went out *before* the due date. Shoot the accountant if it did. Nuff said now — more about this in Chapter 6.

A Ratio That Measures a Whole Lot of Current Stuff: Ratio 16

Working Capital Turnover: Accountants and financial managers use the term "working capital." It means current assets minus current liabilities and is kind of a float — what you have coming in (short term) minus what you have going out (short term). The nearer your working capital gets to zero, the more trouble is what you've got (coming *and* going). On the other hand, for a while at least, the larger your working capital gets, the easier it is

for you to pay your bills. Finally, when you let your working capital become huge (large current assets, few current liabilities), you find yourself with lots of ability to pay whatever few bills do come in, but by the same token you've bought this ability with lots of expensive financing of current assets you really don't need (or if you don't finance, lots of assets earning nothing). A happy medium is just what the doctor ordered. For many well-run manufacturing firms, a happy medium is working capital equal to about one-tenth of annual sales.

People generally talk about working capital by using the working capital turnover ratio, sales divided by working capital, which, if working capital is nothing more than current assets minus current liabilities, can be expressed as:

$$\text{Working capital turnover} = \frac{\text{Net sales}}{\text{Current assets} - \text{current liabilities}}$$

For Bay Area Corrugated, Inc., this is calculated as

$$\frac{\$24{,}000{,}000}{\$12{,}600{,}000 - \$7{,}330{,}000} = 4.6 \text{ turns}$$

Look at the industry ratios. The median is 6.9, the high is 16.1, and the low is 2.3. Ah, slipped by again without winding up on the bottom with our 4.6 turns. Well, no gold stars for us, though. Anything less than 10.0 is not worth crowing about. And, yes, you're very observant; the whole industry here is *not* a sterling performer. I said it, and I'll stand by it: if you can't turn your working capital ten times a year, you just ain't got it.

"So how do you turn it?" Thought you'd never ask! Simple: collect early, pay late, cut inventories, reduce cash — nothing complicated. What it amounts to is a good performance on managing current assets and paying late. "Well, that's hard to do," you say. Well, humbug.

Somebody in the industry got 16.1 working capital turns last year. Probably stayed on the phone collecting, gave good discounts for early payment, used the hell out of free financing (paying late), worked at it like he or she meant it. Sure helps!

Games the Fearless Play: Ratio 7

Long-Term Debt to Equity: The term "leverage" is ubiquitous these days, especially in MBA programs. We love talking about leverage, and we used to say even more about it till interest rates went so high. Unfortunately, the amazing now-you-see-it-now-you-don't arithmetic of leverage pales even with the fastest calculator when interest rates go through the sky. Leverage is using other folks' money to run your business — that is, long-term debt money. (This you pay for.) Leverage refers specifically to the extent to which you substitute long-term debt for your own money (equity). The theory goes something like — all other things being equal — the more of other folks' long-term debt money you use, the less of your own equity you have to use, and therefore the higher the rate of return you earn on your own equity.

That's the theory. In practice it comes out as John's maxim.

John is a wealthy realtor in Chapel Hill who has guided my personal real estate investments for twenty years. For the first ten years, John kept saying to me, "Richard I., if you don't get *some* of your money in that apartment house, the least little wind that comes along will blow your roof off." John wasn't into roof structures; what he meant was that, without some equity money, the payments were so high and the cash flow so low that the apartment couldn't stand anything out of the ordinary (repair expense, for instance) without collapsing financially. I kept assuring John that professors and other cash-poor folks have no choice but to use leverage to the maximum and damn the torpedoes; consequently, I followed the real estate rule for twenty years of buying anything for sale in Chapel Hill that I could buy for nearly

nothing down. Of course, John was right, winds did come; but I was right too — so did inflation in property values averaging about 15% a year in investment real estate over twenty years. (And if you only put 10% down, the equity "inflates" at 150% that year).

Bay, Inc., goes in for leverage. Look back at its balance sheet and you'll see that long-term mortgage note payable of $2,800,000; that's all it takes to qualify! The ratio to measure how fearless you are as a user of other folks' long-term money is called the long-term debt-to-equity ratio and is figured

$$\frac{\text{Long-term debt}}{\text{Stockholders' equity}} = \frac{\$2{,}800{,}000}{\$5{,}870{,}000} = .48$$

which is not too fearless at all. Now a homemade interpretation of .48 is simply that Bay, Inc., uses 48 cents of other people's money in long-term debt for every $1.00 of its own equity money to finance the company. Where does that put Bay in the array of fearless entrepreneurs?

The industry ratio study shows the top long-term debt-to-stockholders' equity ratio of 3.9 (which means that some fearless type uses $3.90 of other folks' long-term money for every $1.00 of his own), a median value of .4, and a bottom of 0 (which implies that there is at least one company with no long-term debt). So Bay, Inc., is about in the middle of the pack.

So What? And Why?

Like everything else there's a good reason to use leverage, that is, raise your own debt-to-equity ratio. That reason is to increase your return on stockholders' equity. Here's how it goes. Suppose you have this little company:

Sales	$1,200,000
Profit before taxes	120,000
Taxes (say, 40%)	48,000
Profit after taxes	72,000
Long-term debt	—
Asset turnover	2.0

Assets ($1,200,000/2.0)	600,000
Owners' equity (all assets financed with equity)	600,000

Using these figures, you'd calculate your return on owners' equity (after taxes) as $72,000 ÷ $600,000 = 12%, and your debt-to-equity ratio would be $0 ÷ $600,00 or zero.

Now, 12% after taxes these days isn't the joy it once was, so you get to work and borrow $200,000 (at a 12.5% interest rate) for five years, secured by a note on your plant. Then the picture changes to this:

Sales	$1,200,000
Profits before taxes ($120,000 less interest on note of $25,000)	95,000
Taxes (say, still 40%)	38,000
Profit after taxes	57,000
Long-term debt	200,000
Asset turnover	2.0
Assets ($1,200,000/2.0)	600,000
Owners' equity (since you have put $200,000 debt into the company, you can take out that much equity. . . if you know how to get it out)	400,000

Now, using these new numbers, we calculate your after-tax return on owners' equity to be $57,000 ÷ $400,000 = 14.3%. That's a nice little jump up from the 12% we were making before we introduced leverage, and we've paid for the use of the money too.

More, More!

Now to the greedy part. If a jump from 12% to 14.3% is so good, why not borrow, say, $350,000 more in long-term debt, invest it in the company, drain most of your own equity out of the company, and earn an enormous percentage return on your equity? Answer: it can't be done. The hell it can't! Read the letter on pg. 130 I got a few years ago from a friend of mine in California. With a long-

term debt-to-equity ratio of 6.9, that's exactly what he did — took most of his equity out of the company and substituted long-term debt. Is your mouth watering? Would you like to know more?

Well, the rules are simple: (1) you have to find some damn fool who will lend you that much; (2) you have to figure out how to borrow it at an interest rate low enough so that you can afford to pay the interest; and (3) you have to be the type who can sleep nights with this debt-to-equity ratio hanging over your head like the sword of Damocles. That's all! My friend does it well. He's in the oil business, doesn't think too much of the future of the industry — wanted to get most of his money out and found a good deal on rates and terms. He put up the whole company as collateral and systematically drained his equity out (ways to do this without paying it all in taxes coming in Chapter 8). And, not to forget, he earns a nice 109.5% on equity too. Not bad! If you can stand the heat. Unfortunately, the rest of us have to get along with long-term debt-to-equity ratios a bit lower, but we should at least recognize the potential of well-planned and well-executed leverage plays so we can join the game if one comes along. Remember John's maxim, though: with this leverage, if a little wind comes along it'll blow your roof off! Still want to play the leverage game? More on how in Chapter 6.

Reprise

Running the company well (knowing how to make and sell pipe) brings some pennies down to the bottom line — you know, return on sales and all that good stuff. However, to generate a return on *your money* (the real name of the game unless you were born rich), you have got to run the balance sheet right. And we all know what that means: collect early, pay late, buy less, sell your Transtar, turn your inventory more, and, yes, try a little leverage in your life — you'll love it!

July 24, 1978

Dr. Dick Levin
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Dear Dick:

Enjoyed the Seminar you and John put on in San Francisco very much. I thought you might be interested in some of the pertinent Balance Sheet figures and ratios of our business. I should mention that all real estate is outside the corporation.

Annual sales (est.)	$7,300,000
Net profit before taxes (est.)	65,700*
Current assets (June 30, 1978)	721,793
Fixed assets (June 30, 1978)	146,622
Total assets (June 30, 1978)	868,415
Current liabilities (June 30, 1978)	192,453
Accounts payable (June 30, 1978)	643,218
Long-term liabilities (June 30, 1978)	590,600†
Stockholders' equity (Jan. 1, 1978)	60,000
Stockholders' equity (June 30, 1978)	85,362
Net profit before taxes/net sales	0.9 %
Net profit before taxes/net worth	109.5 %
Gross profit/sales (Jan. 1)	7.4 %
Net sales/total assets	$8.41
Net sales/fixed assets	$49.79
Net sales/current assets	$10.22
Collection period	15.8 days
Net sales/inventory	60.8
Long-term debt/net worth	691.9%

*After a nearly unconscionable set of salaries.

†This includes $40,000 serial debentures payable to my father and me in 1985.