Part 1

Financing Current Operations

Introductory Exercises

Assessing a Firm's Future Financial Health

Assessing the long-term financial health of a company is an important task for management in its formulation of goals and strategies and for outsiders as they consider the extension of credit, long-term supplier arrangements, or an investment in the company's equity. History abounds with examples of firms that embarked upon overly ambitious programs and subsequently discovered that their portfolio of programs could not be financed on acceptable terms. The outcome frequently was the abandonment of programs in midstream, at considerable financial, organizational, and human cost.

It is the responsibility of management to *anticipate* future imbalance in the corporate financial system *before* its severity is reflected in the financials, and to consider corrective action before both time and money are exhausted. The avoidance of bankruptcy is an insufficient standard. Management must ensure the continuity of the flow of funds to all of its strategically important programs.

Figure I provides a conceptualization of the corporate financial system, with a suggested step-by-step process to assess whether it will remain in balance over the ensuing 2–3 years. The remainder of this note discusses each of the steps in the process and then provides an exercise on the various financial ratios that are useful as part of the analysis. The final section of the note demonstrates the relationship between a company's operating characteristics and its financial characteristics.

Step 1: Goals, Strategies, and Operating Characteristics and Step 2: Outlook for Firm Sales

The starting point for assessing a firm's long-term financial health must be a thorough investigation of (1) management's goals for the company and for each of the businesses (product markets) in which it chooses to compete; (2) the strategy planned for each product market; (3) the outlook for the market in terms of unit growth, product price, volatility, and predictability; (4) the main operating/technological/competitive/regulatory characteristics and risks; and (5) the outlook for the firm's sales.

The analyst is well-advised to devote substantial time exploring these areas as the corporate financial system is driven by the goals, strategies, market conditions, and the

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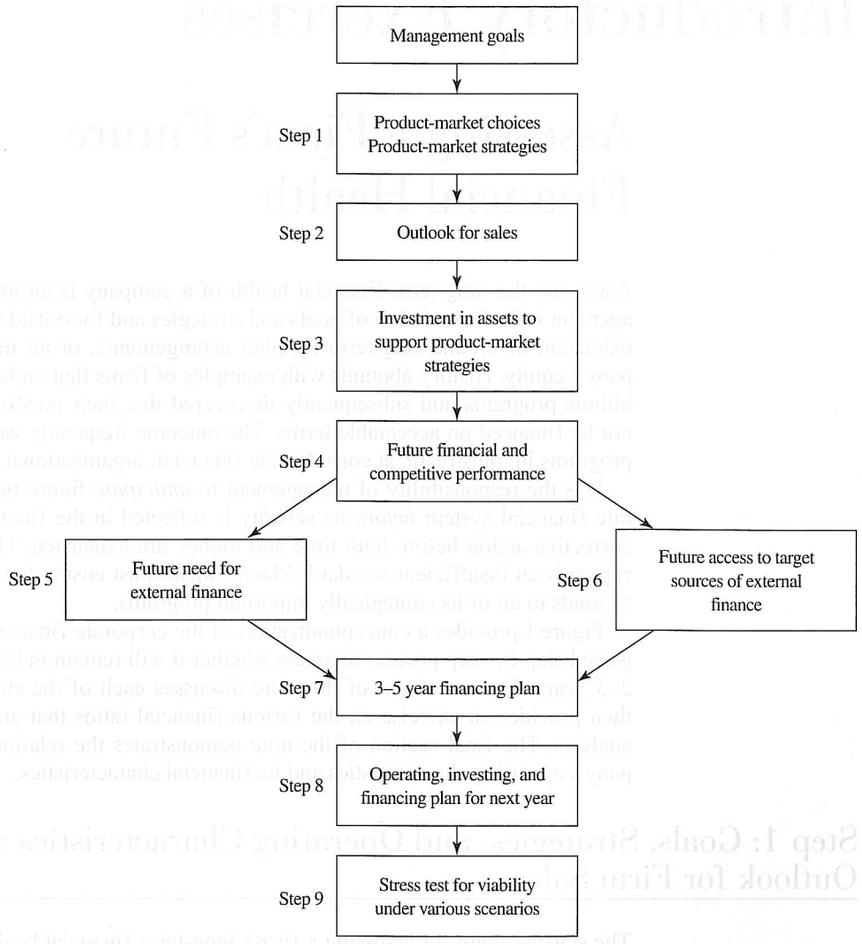
FIGURE I
The Corporate Financial System

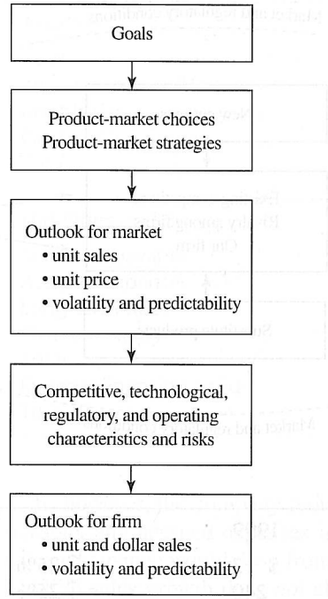


operating characteristics and risks. The firm's strategy and sales growth in each of its product-markets will largely determine the investment in assets needed to support these strategies; and the effectiveness of the strategies, combined with the response of competitors, will strongly influence the firm's competitive and profit performance and its resultant access to funds to finance the investment in the various type assets.

Step 3: Investments to Support the Product-Market Strategy(ies)

The product-market strategies inevitably require investments in accounts receivable, inventories, plant and equipment, and possibly, acquisitions. (They may also require heavy expenditures on research and development and/or high advertising and promotion expenditures to build market position. Because these expenditures are normally expensed, they will be discussed later as part of the section on performance.) Step 3 of the process is an attempt to estimate (1) the amounts that will be tied up in each of these asset types,

FIGURE II
Goals, Strategies, and Operating Characteristics



and (2) the level of total assets over the next 2–3 years. An analyst can make these estimates by studying the past pattern of the collection period, the days of inventory, and plant and equipment as a percent of cost of goods sold; and then applying a "reasonable value" for each to the sales forecast or the forecast of cost of goods sold.

Step 4: Future Profitability and Competitive Performance

Strong profitability is a necessity over the long run, for the level of profitability strongly influences (1) the company's access to debt finance; (2) the valuation of the company's common stock; (3) management's willingness to issue common stock; and (4) the company's "sustainable sales growth." Once again, a reasonable starting point is to analyze the past pattern of profitability, starting with a careful scrutiny of the underlying accounting choices and assumptions:

1. What has been the average level, trend, and volatility of profitability?
2. Is the level of profitability sustainable, given the outlook for the market and for competitive and regulatory pressures? (Figure III summarizes market and industry factors that can affect a firm's future profit performance.) Will profitability benefit from improving industry and competitive conditions?
3. Has management initiated major profit improvement programs?
4. Are there any "hidden" problems, such as suspiciously large levels or buildups of accounts receivable or inventories relative to sales, or a series of unusual transactions and/or accounting changes?
5. Is the company strong in terms of customer service, new product development, product quality, and management and employee retention and development? Is the current level of profitability at the expense of future growth and profitability?

IGURE III
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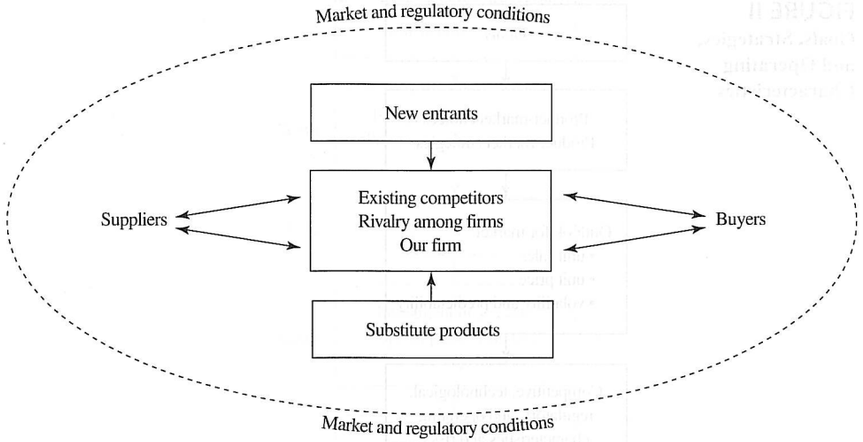
n Profitability



'ABLE I
.ssuming a 25%
ıcrease in Sales
$ in millions)

Assets	1999		2000
Cash	$ 12	↑ 25%	$ 15
Accounts receivable	240	↑ 25%	300
Inventories	200	↑ 25%	250
Plant & equipment	400	↑ 25%	500
Total	$852		$1,065
Liabilities and Equity			
Accounts payable	$100	↑ 25%	$ 125
Accrued expenses	80	↑ 25%	100
Long-term debt	252	unchanged	252
Owners' equity	400	footnote[a]	442
Total	$852		$ 939
External financing need	0		126
Total	$852		$1,065

[a]It is assumed that the firm earns $60 million (a 15% return on beginning of year equity) and pays out $18 million as a cash dividend.

Step 5: Future External Financing Needs

Whether a company has a future external financing need depends on (1) its future sales growth, (2) the length of its cash cycle, and (3) the future level of profitability and profit retention. Rapid sales growth by a company with a long cash cycle (a long collection period + high inventories + high plant and equipment relative to sales) and low profitability/low profit retention is a recipe for an ever-increasing appetite for external finance, raised in the form of loans, debt issues, and/or sale of shares. Why? Because the rapid sales growth results in the rapid growth of an already large level of total assets. The increase in total assets is offset partially by an increase in accounts payable and accrued expenses, and by a small increase in owners' equity. However, the financing gap is substantial. For example, the company portrayed in Table I requires $126 million of additional external finance by the end of year 2000 to support the increase in total assets required to support 25% per year sales growth in a business that is fairly asset intensive.

TABLE II
Food Retailer—20% Increase in Sales

Assets	1999		2000
Cash	$ 12	↑ 20%	$ 14
Accounts receivable	0		0
Inventories	17	↑ 20%	20
Plant & equipment	80	↑ 20%	96
Total	$109		$130
Liabilities and Equity			
Accounts payable	$ 66	↑ 20%	$ 79
Accrued expenses	35	↑ 20%	42
Long-term debt	0		0
Owners' equity	8		9
Total	$109		$130
External financing need	0		0
Total	$109		$130

If, however, the company reduced its sales growth to 5% (and total assets, accounts payable, and accrued expenses increased accordingly by 5%), the need for additional external finance would drop from $126 million to $0.

High sales growth does *not* always result in a need for additional external finance. For example, a food retailer that extends no credit to customers, has only eight days of inventory, and does not own its warehouses and stores can experience rapid sales growth and not have a need for additional external finance *provided* it is reasonably profitable. Because it has so few assets, the increase in total assets is largely offset by a corresponding, spontaneous increase in accounts payable and accrued expenses.

Step 5 requires the development of pro forma income statements and balance sheets for each of the next 2–3 years to estimate (1) the dollar amount and timing of future external financing needs, (2) for how long the financing will be needed, (3) the confidence level in the forecasts, and (4) the deferrability of the underlying expenditures if the funds cannot be raised on acceptable terms.

Step 6: Access to Target Sources of External Finance

Having estimated the future financing need, management must identify the target sources (e.g., banks, insurance companies, public debt markets, public equity markets) and establish financial policies that will ensure access on acceptable terms:

1. How soundly is the company financed, given its level of profitability and cash flow, its level of business risk, and its future need for finance?
   a. How current is the company in its payment of suppliers?
   b. Is the company within its capacity to service the debt? What is the maturity structure of the existing debt?
   c. Is the company near to its borrowing limits according to restrictive covenants? Is it close to its internal policies in terms of debt levels and/or debt ratings?
   d. Are there any "hidden problems" such as unconsolidated subsidiaries with high debt levels or large contingent or unfunded liabilities?
2. Does the company have assured access to the debt markets? What are the target sources and what are their criteria for lending?
3. Does the company have assured access on acceptable terms to the equity markets? Is there a market for the shares? How many shares could be sold and at what price? Are management and/or the controlling shareholders(s) willing to issue additional shares?

4. Does the company have assets that could be sold to raise funds? At what price and how quickly could the assets be sold under ideal conditions? under adverse conditions?

Step 7: Viability of the 3–5 Year Plan

Are the company's goals, product-market strategies, investment requirements, and financing needs in balance with its financing capabilities over the 3–5 year planning period? What approximate mix of debt and equity must be raised to remain in compliance with the firm's debt policy?

Step 8: Current Year Financing Plan

How should the firm meet the current year's financing need? How should it balance the benefits of future financing flexibility (by selling equity now) and the hopes of realizing a higher share price by waiting to sell the equity (and therefore issuing debt now)?

Step 9: Stress Test under Scenarios of Adversity

Most 3–5 year financing plans work well if the expected scenario on which they are based in fact occurs. The test of the soundness of a 3–5 year plan is whether the continuity of the flow of funds to all strategically important programs can be maintained (or at least maintained as well as that of your competitors) even in times of adversity.

Figure IV is a somewhat more complete version of Figure I. Clearly, many of these questions require information beyond that contained in a company's published financial statements. Many require a thorough understanding of (1) the long-term goals and plans of management, (2) future industry structure and competitive behavior, (3) the competitive/technological/regulatory/operating characteristics of the industry and company, (4) the "availability" criteria of various sources of finance, and (5) the soundness of management. Analysis of the published financial statements and their footnotes is only *one part* of a complete analysis of a company's future financial health.

It is also clear that the evaluation of a firm's financial health can vary substantially, depending on the perspective of the individual making the evaluation. A bank or supplier considering the extension of seasonal credit may consider a company a very safe bet, whereas a long-term lender dependent on the health and profitability of that same company over a 15-year period may be very nervous.

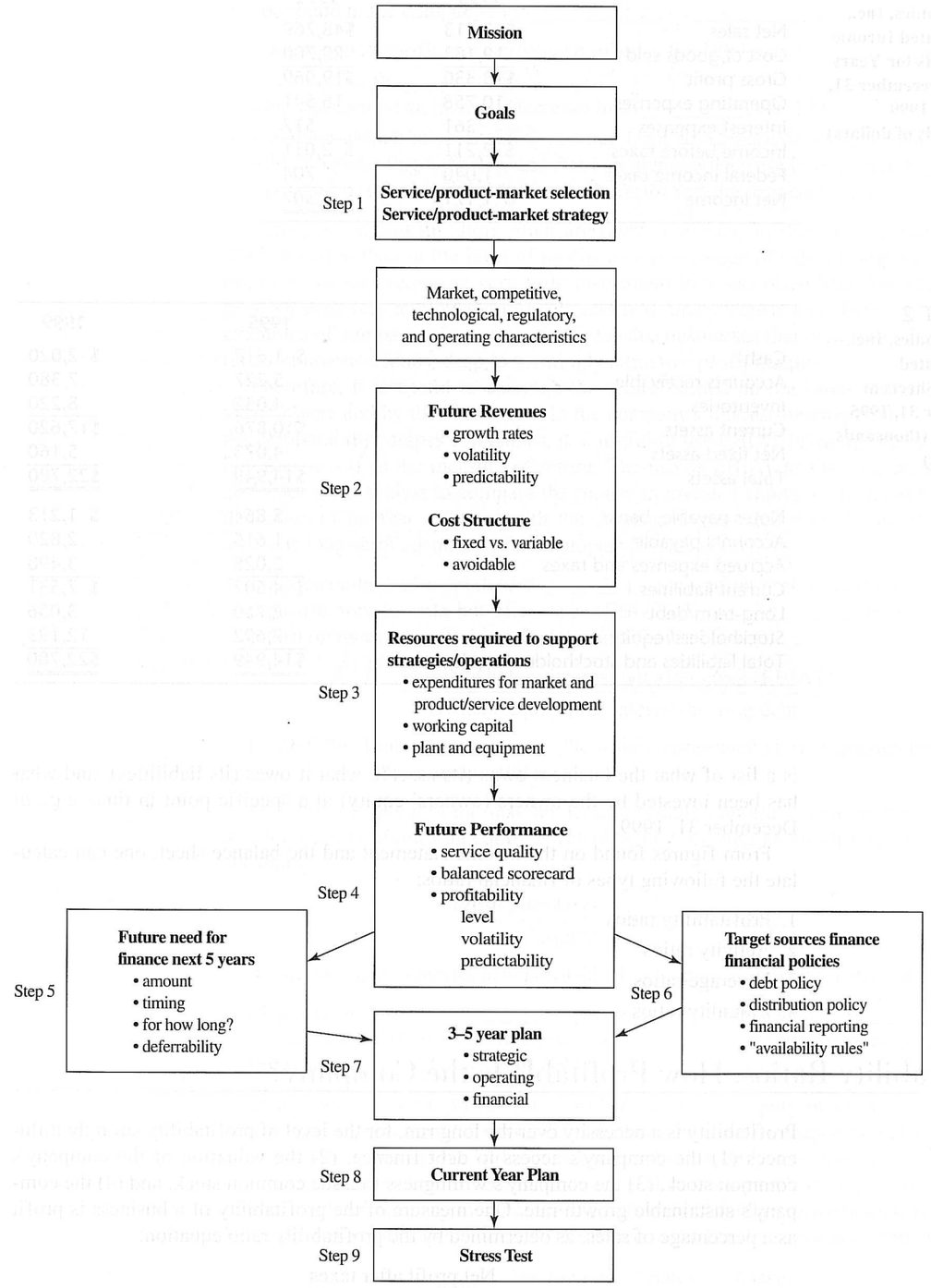
The remainder of this note provides familiarity with the financial ratios that can be useful in answering some of the preceding questions. Exhibits 1 and 2 provide financial statements for 1995 and 1999 for a hypothetical company. The following section (Financial Ratios and Financial Analysis) presents four types of financial ratios and then asks a series of questions concerning the financial statements in Exhibits 1 and 2. Use the equations to answer two overall questions:

1. Has the financial condition of the company changed during the four-year period?
2. What are the most significant changes, as indicated by the financial ratios?

Financial Ratios and Financial Analysis

The two basic sources of financial data for a business entity are the income statement and the balance sheet. The income statement summarizes revenues and expenses over a period of time, e.g., for the year ending December 31, 1999. The balance sheet

FIGURE IV Corporate Financial System



XHIBIT 1
Iagnetronics, Inc., :onsolidated Income tatements for Years nding December 31, 995 and 1999 :housands of dollars)

	1995	1999
Net sales	$32,513	$48,769
Cost of goods sold	19,183	29,700
Gross profit	$13,330	$19,069
Operating expenses	10,758	16,541
Interest expenses	361	517
Income before taxes	$ 2,211	$ 2,011
Federal income taxes	1,040	704
Net income	$ 1,171	$ 1,307

.XHIBIT 2
Iagnetronics, Inc., :onsolidated alance Sheets at ecember 31, 1995 nd 1999 (thousands f dollars)

	1995	1999
Cash	$ 1,617	$ 2,020
Accounts receivable	5,227	7,380
Inventories	4,032	8,220
Current assets	$10,876	$17,620
Net fixed assets	4,073	5,160
Total assets	$14,949	$22,780
Notes payable, banks	$ 864	$ 1,213
Accounts payable	1,615	2,820
Accrued expenses and taxes	2,028	3,498
Current liabilities	$ 4,507	$ 7,531
Long-term debt	2,750	3,056
Stockholders' equity	7,692	12,193
Total liabilities and stockholders' equity	$14,949	$22,780

is a list of what the business owns (its assets), what it owes (its liabilities), and what has been invested by the owners (owners' equity) at a specific point in time, e.g., *at* December 31, 1999.

From figures found on the income statement and the balance sheet, one can calculate the following types of financial ratios:

1. Profitability ratios
2. Activity ratios
3. Leverage ratios
4. Liquidity ratios

Profitability Ratios: How Profitable Is the Company?

Profitability is a necessity over the long run, for the level of profitability strongly influences (1) the company's access to debt finance, (2) the valuation of the company's common stock, (3) the company's willingness to issue common stock, and (4) the company's sustainable growth rate. One measure of the profitability of a business is profit as a percentage of sales, as determined by the profitability ratio equation:

$$\frac{\text{Net profit after taxes}}{\text{Net sales}}$$

The information necessary to determine a company's profit as a percentage of sales can be found in the company's _____.

1. Magnetronics' profit as a percentage of sales for 1999 was $_____ divided by $_____, or _____%.
2. This represented an increase/decrease from _____% in 1995.
3. The deterioration in profitability resulted from an increase/decrease in cost of goods sold as a percentage of sales, and from an increase/decrease in operating expenses as a percentage of sales. The only favorable factor was the decrease in the _____.

Management and investors often are more interested in the return earned on the funds invested than in the level of profits as a percentage of sales. Companies operating in businesses requiring very little investment in assets often have low profit margins but earn very attractive returns on invested funds. Conversely, there are numerous examples of companies in very capital-intensive businesses that earn miserably low returns on invested funds, despite seemingly attractive profit margins.

Therefore, it is useful to examine the return earned on the funds provided by the shareholders and by the "investors" in the company's interest-bearing debt. To increase the comparability across companies, it is useful to use EBIAT (earnings before interest but after taxes) as the measure of return. The use of EBIAT as the measure of return also allows the analyst to compare the return on invested capital (calculated before the deduction of interest expense) with the company's estimated cost of capital to determine the long-term adequacy of the company's profitability.

4. Magnetronics had a total of $_____ of capital at year-end 1999 and earned before interest but after taxes (EBIAT) $_____ during 1999. Its return on invested capital is calculated as follows:

$$\frac{\text{Earnings before interest but after taxes (EBIAT)}}{\text{Owners' equity plus interest-bearing debt}}$$

In 1999 this figure was _____%, which represented an **increase/decrease** from the _____% earned in 1995.

From the viewpoint of the shareholders, an equally important figure is the company's return on equity. Return on equity is calculated by dividing profit after tax by the owners' equity.

$$\frac{\text{Profit after taxes}}{\text{Owners' equity}} = \text{Return on equity}$$

Return on equity indicates how profitably the company is utilizing shareholders' funds.

5. Magnetronics had $_____ of owners' equity and earned $_____ after taxes in 1999. Its return on equity was _____%, an **improvement/deterioration** from the _____% earned in 1995.

Management can "improve" (or "hurt") its return on equity in several ways. Each method of "improvement" differs substantially in nature. The analyst must look behind the return on equity figures and must understand the underlying causes of any changes. For example, did Return on Sales improve? Did the company's management of assets change? Did the company increase the use of borrowed funds relative to owners' equity? These three possible explanations are combined in the Du Pont system of ratio analysis:

$$\text{ROE} = \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}}$$

Activity Ratios: How Well Does a Company Employ Its Assets?

The second basic type of financial ratio is the activity ratio. Activity ratios indicate how well a company employs its assets. Ineffective utilization of assets results in the need for more finance, unnecessary interest costs, and a correspondingly lower return on capital employed. Furthermore, low activity ratios or a deterioration in the activity ratios may indicate uncollectible accounts receivables or obsolete inventory or equipment.

Total asset turnover measures the company's effectiveness in utilizing its total assets and is calculated by dividing total assets into sales:

$$\frac{\text{Net sales}}{\text{Total assets}}$$

1. Total asset turnover for Magnetronics in 1999 can be calculated by dividing $\$$_____ into $\$$_____. The turnover **improved/deteriorated** from _____ times in 1995 to _____ times in 1999.

It is useful to examine the turnover ratios for each type of asset, as the use of total assets may hide important problems in one of the specific asset categories. One important category is accounts receivables. The average collection period measures the number of days that the company must wait on average between the time of sale and the time when it is paid. The average collection period is calculated in two steps. First, divide annual credit sales by 365 days to determine average sales per day:

$$\frac{\text{Net credit sales}}{\text{365 days}}$$

Then, divide the accounts receivable by average sales per day to determine the number of days of sales that are still unpaid:

$$\frac{\text{Accounts receivable}}{\text{Credit sales per day}}$$

2. Magnetronics had $\$$_____ invested in accounts receivables at year-end 1999. Its average sales per day were $\$$_____ during 1999 and its average collection period was _____ days. This represented an **improvement/deterioration** from the average collection period of _____ days in 1995.

A third activity ratio is the inventory turnover ratio, which indicates the effectiveness with which the company is employing inventory. Since inventory is recorded on the balance sheet at cost (not at its sales value), it is advisable to use cost of goods sold as the measure of activity. The inventory turnover figure is calculated by dividing cost of goods sold by inventory:

$$\frac{\text{Cost of goods sold}}{\text{Inventory}}$$

3. Magnetronics apparently needed $\$$_____ of inventory at year-end 1999 to support its operations during 1999. Its activity during 1999 as measured by the cost of goods sold was $\$$_____. It therefore had an inventory turnover of _____ times. This represented an **improvement/deterioration** from _____ times in 1995.

A fourth and final activity ratio is the fixed asset turnover ratio, which measures the effectiveness of the company in utilizing its plant and equipment:

$$\frac{\text{Net sales}}{\text{Net fixed assets}}$$

4. Magnetronics had net fixed assets of $\$$_____ and sales of $\$$_____ in 1999. Its fixed asset turnover ratio in 1999 was _____ times, an **improvement/deterioration** from _____ times in 1995.
5. So far, we have discussed three measure of profitability: They are (a) _____ _____ (b) _____ and (c) _____ _____. We have also discussed four activity ratios which measure the effectiveness of the company in utilizing its assets: They are (d) _____ _____ (e) _____ (f) _____ _____ and (g) _____.
6. The deterioration in Magnetronics' operating profits as a percentage of total assets between 1995 and 1999 resulted primarily from _____ _____ _____ _____ _____ _____

Leverage Ratios: How Soundly Is the Company Financed?

The third basic type of financial ratio is the leverage ratio. The various leverage ratios measure the relationship of funds supplied by creditors and the funds supplied by the owners. The use of borrowed funds by profitable companies will improve the return on equity. However, it increases the riskiness of the business and, if used in excessive amounts, can result in financial embarrassment.

One leverage ratio, the debt ratio, measures the total funds provided by creditors as a percentage of total assets:

$$\frac{\text{Total liabilities}}{\text{Total assets}}$$

Total liabilities include both current and long-term liabilities.

1. The total liabilities of Magnetronics as of December 31, 1999, were $\$$_____ or _____% of total assets. This represented an **increase/decrease** from _____% as of December 31, 1995.

Lenders—especially long-term lenders—want reasonable assurance that the firm will be able to repay the loan in the future. They are concerned with the relationship between total debt and the economic value of the firm. This ratio is called the total debt ratio at market.

$$\frac{\text{Total liabilities}}{\text{Total liabilities + Market value of the equity}}$$

The market value of equity is calculated by multiplying the number of shares outstanding of common stock times the market price per share.

2. The market value of Magnetronics' equity is $14,275,000 at December 31, 1999. Its total debt ratio at market was _____.

A second ratio that relates the level of debt to economic value and performance is the times interest earned ratio. This ratio relates earnings before interest and taxes—a measure of profitability and of long-term viability—to the interest expense—a measure of the level of debt.

$$\frac{\text{Earnings before interest and taxes}}{\text{Interest expense}}$$

3. Magnetronics' earnings before interest and taxes were $_____ in 1999 and its interest charges were $_____. Its times interest earned was _____ times. This represented an **improvement/deterioration** from the 1995 level of _____ times.

A fourth and final leverage ratio is the number of days of payables. This ratio measures the average number of days that the company is taking to pay its suppliers of raw materials and components. It is calculated by dividing annual purchases by 365 days to determine average purchases per day:

$$\frac{\text{Annual purchases}}{\text{365 days}}$$

Accounts payable are then divided by average purchases per day:

$$\frac{\text{Accounts payable}}{\text{Average purchases per day}}$$

to determine the number of days purchases that are still unpaid.

It is often difficult to determine the purchases of a firm. Instead, the income statement shows cost of goods sold, a figure that includes not only raw materials but also labor and overhead. Thus, it often is only possible to gain a rough idea as to whether or not a firm is becoming more or less dependent on its suppliers for finance. This can be done by relating accounts payable to cost of goods sold,

$$\frac{\text{Accounts payable}}{\text{Cost of goods sold}}$$

and following this ratio over time.

4. Magnetronics owed its suppliers $_____ at year-end 1999. This represented _____% of cost of goods sold and was an **increase/decrease** from _____% at year-end 1995. The company appears to be **more/less** prompt in paying its suppliers in 1999 than it was in 1995.
5. The deterioration in Magnetronics' profitability, as measured by its return on equity, from 15.2% in 1995 to 10.7% in 1999 resulted from the combined impact of _____ _____ _____ and _____ _____.
6. The financial riskiness of Magnetronics **increased/decreased** between 1995 and 1999.

Liquidity Ratios: How Liquid Is the Company?

The fourth basic type of financial ratio is the liquidity ratio. These ratios measure a company's ability to meet financial obligations as they become current. The current ratio, defined as current assets divided by current liabilities,

$$\frac{\text{Current assets}}{\text{Current liabilities}}$$

assumes that current assets are much more readily and certainly convertible into cash than other assets. It relates these fairly liquid assets to the claims that are due within one year—the current liabilities.

1. Magnetronics held $_____ of current assets at year-end 1999 and owed $_____ to creditors due to be paid within one year. Its current ratio was _____, an **improvement/deterioration** from the ratio of _____ at year-end 1995.

The quick ratio, or acid test, is similar to the current ratio but excludes inventory from the current assets:

$$\frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}}$$

Inventory is excluded because it is often difficult to convert into cash (at least at book value) if the company is struck by adversity.

2. The quick ratio for Magnetronics at year-end 1999 was _____, an **improvement/deterioration** from the ratio of _____ at year-end 1995.

A Warning

The calculated ratios are no more valid than the financial statements from which they are derived. The quality of the financial statements should be assessed, and appropriate adjustments made, before any ratios are calculated. Particular attention should be placed on assessing the reasonableness of the accounting choices and assumptions embedded in the financial statements.

The Case of the Unidentified Industries

The preceding exercise suggests a series of questions that may be helpful in assessing a company's future financial health. It also describes several ratios that are useful in answering some of the questions, especially if the historical trend in these ratios is examined.

However, it is also important to compare the actual absolute value with some standard to determine whether the company is performing well. Unfortunately, there is no single current ratio, inventory turnover, or debt ratio that is appropriate to all industries, and even within a specific industry, ratios may vary significantly among companies. The operating and competitive characteristics of the company's industry greatly influence its investment in the various types of assets, the riskiness of these investments, and the financial structure of its balance sheet.

Try to match the five following types of companies with their corresponding balance sheets and financial ratios as shown in Exhibit 3.

1. Electric utility
2. Japanese trading company
3. Aerospace manufacturer
4. Automobile manufacturer
5. Supermarket chain

In doing the exercise, consider the operating and competitive characteristics of the industry and their implications for (1) the collection period, (2) inventory turnover, (3) the amount of plant and equipment, and (4) the appropriate financial structure. Then identify which one of the five sets of balance sheets and financial ratios best matches your expectations.

XHIBIT 3 **Unidentified Balance Sheet**

	A	B	C	D	E
Balance Sheet Percentages					
Cash	7.6%	2.7%	1.4%	7.2%	12.7%
Receivables	31.7	4.7	2.9	60.3	11.5
Inventories	5.3	2.0	23.0	8.7	48.1
Other current assets	1.2	3.0	1.8	7.3	0.0
Property and equipment (net)	30.2	66.6	49.9	4.3	25.0
Other assets	24.0	21.0	21.0	12.2	2.7
Total assets	100.0%	100.0%	100.0%	100.0%	100.0%
Notes payable	38.4%	4.2%	4.6%	50.8%	0.9%
Accounts payable	5.5	3.0	20.0	15.2	21.5
Other current liabilities	1.5	4.7	12.7	5.7	27.4
Long-term debt	17.4	30.0	37.5	22.7	8.1
Other liabilities	26.5	22.9	9.8	1.3	8.1
Owners' equity	10.7	35.2	15.4	4.3	34.0
Total liabilities and equity	100.0%	100.0%	100.0%	100.0%	100.0%
Selected Ratios					
Net profits/net sales	.04	.14	.02	.01	.05
Net profits/total assets	.03	.05	.06	.01	.03
Net profits/owners' equity	.29	.14	.41	.13	.10
Net sales/total assets	.78	.36	3.2	2.1	.67
Collection period (days)	149	48	3	106	63
Inventory turnover	11	10	10	23	1.1
Total liabilities/total assets	.89	.65	.85	.96	.66
Long-term debt/owners' equity	1.6	.85	2.4	5.3	.24
Current assets/current liabilities	1.0	1.0	.8	1.0	1.4
Quick ratio	.9	.9	.2	.9	.5

Tire City, Inc.

Jack Martin, Chief Financial Officer of Tire City, Inc., was preparing for a meeting with his company's bank later in the week. At that meeting, Mr. Martin intended to present a request that the bank grant Tire City a five-year loan to finance anticipated growth in the company and the expansion of the company's warehouse facilities.

In preparation for his meeting, Martin had gathered some recent financial statements for Tire City (see Exhibit 1).

Company Background

Tire City, Inc. (TCI) was a rapidly growing retail distributor of automotive tires in northeastern United States. Tires were sold through a chain of 10 shops located throughout eastern Massachusetts, southern New Hampshire, and northern Connecticut. These stores kept sufficient inventory on hand to service immediate customer demand, but the bulk of TCI's inventory was managed at a central warehouse outside Worcester, Massachusetts. Individual stores could be easily serviced by this warehouse, which could usually fill orders from individual stores within 24 hours.

For the year ended in December 1995, TCI had sales of $23,505,000. Net income for that period was $1,190,000. During the previous three years, sales had grown at a compound annual rate in excess of 20%. This record was a reflection of Tire City's reputation for excellent service and competitive pricing, which yielded high levels of customer satisfaction.

Past Relationship with MidBank

In 1991, TCI had borrowed funds from MidBank to build a warehouse. This loan was being repaid in equal annual installments of $125,000. At the end of 1995, the balance due on the loan was $875,000. Also, in 1991 TCI established a line of credit at MidBank. The company had not yet borrowed any money under this credit arrangement.

Current Financial Need

TCI had decided to expand its warehouse facilities to accommodate future growth. Indeed, the current warehouse facilities were practically bulging at the seams. During the next 18 months, TCI planned to invest $2,400,000 on its expansion, $2,000,000 of which would be spent during 1996 (no other capital expenditures were planned for 1996 and 1997). This expansion would fulfill the company's anticipated needs for several years. The warehouse construction project was expected to be completed in early

Professor W. Carl Kester prepared this case as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

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EXHIBIT 1
Financial Statements for Tire City, Inc.

For Years Ending 12/31	1993	1994	1995
INCOME STATEMENT			
Net sales	$16,230	$20,355	$23,505
Cost of sales	9,430	11,898	13,612
Gross profit	6,800	8,457	9,893
Selling, general, and administrative expenses	5,195	6,352	7,471
Depreciation	160	180	213
Net interest expense	119	106	94
Pre-tax income	1,326	1,819	2,115
Income taxes	546	822	925
Net income	$ 780	$ 997	$ 1,190
Dividends	$ 155	$ 200	$240
BALANCE SHEET			
Assets			
Cash	$ 508	$ 609	$ 706
Accounts receivable	2,545	3,095	3,652
Inventories	1,630	1,838	2,190
Total current assets	4,683	5,542	6,548
Gross plant & equipment	3,232	3,795	4,163
Accumulated depreciation	1,335	1,515	1,728
Net plant & equipment	1,897	2,280	2,435
Total assets	$ 6,580	$ 7,822	$ 8,983
LIABILITIES			
Current maturities of long-term debt	$ 125	$ 125	$ 125
Accounts payable	1,042	1,325	1,440
Accrued expenses	1,145	1,432	1,653
Total current liabilities	2,312	2,882	3,218
Long-term debt	1,000	875	750
Common stock	1,135	1,135	1,135
Retained earnings	2,133	2,930	3,880
Total shareholders' equity	3,268	4,065	5,015
Total liabilities	$ 6,580	$ 7,822	$ 8,983

1997. Therefore, TCI would not be able to deduct any depreciation on the new building in 1996. However, Mr. Martin was told by his accountant that in 1997, TCI could recognize a depreciation expense of 5% of the warehouse's total cost. The dollar value of TCI's depreciation expense on its other assets in 1996 and 1997 would be the same as it was in 1995.

The warehouse expansion project was designed so that disruption of the company's current operations would be minimized. However, management expected that by the end of 1996, TCI would temporarily have to decrease its inventories to a level of $1,625,000, significantly lower than the $2,190,000 shown on the balance sheet at the end of 1995. This cutback in inventories was expected to last only until the warehouse construction project was completed in early 1997. Mr. Martin had estimated that, by the end of 1997, inventory would rise back to the same proportional relationship to sales that it had in 1995.

Other than this temporary drop in inventory in 1996, the warehouse expansion was not expected to affect TCI's operations in any other material respects. Operating margins were expected to be consistent with recent past experience (the temporary drop in inventory would not affect cost of goods sold as a percent of sales, for example). Likewise, current accounts other than inventory were expected to maintain steady relationships to sales. Cash balances, for instance, would be maintained at a level of 3% of sales during the next two years. Although the Federal statutory marginal corporate tax rate was 35%, the average tax rate on TCI's pre-tax income had typically been higher than this due to miscellaneous local taxes. This higher overall level of taxation was expected to continue in the future at rates consistent with the most recent past experience. In view of this anticipated stability, Mr. Martin expected TCI's dividend payout policy to remain unchanged in the foreseeable future.

TCI had preliminary discussions with MidBank about borrowing money to finance the warehouse expansion and the growth of the business. The proposed terms of the financing called for taking down (i.e., borrowing) the loan in two separate parts on an as-needed basis: one in 1996 and one in 1997. The loan would be repaid in four equal annual installments. The first installment payment would take place one year after the construction of the warehouse was completed (i.e., in 1998). The interest rate was set at 10% per year.

Mr. Martin's Task

In preparation for his meeting, Mr. Martin intended to develop a set of pro forma financial statements for the company. He and his staff had projected a 20% increase in sales each year in 1996 and in 1997, from $23,505,000 to $28,206,000 and $33,847,000, respectively. Mr. Martin's first priority was to predict what the rest of the income statement and the balance sheet for the firm would look like at the end of 1996 and 1997.